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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETY OF PARIS;
PRESIDENT OF THE LINNÆAN SOCIETY.

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THE FIGURES BY

JAMES SOWERBY, F.L.S.

——"VIRESQUE ACQUIRIT EUNDO." *Virg.*

VOL. XIII.

LONDON:

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Azalea procumbens.

AZALEA procumbens.
Trailing Azalea.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-shaped. *Stamina* regular, inserted into the receptacle. *Caps.* superior, 5-celled.

SPEC. CHAR. Branches spreading and procumbent. Leaves opposite, revolute, very smooth

SYN. Azalea procumbens. *Linn. Sp. Pl.* 215. *Sm. Fl. Brit.* 231. *Huds.* 88. *With.* 239. *Hull.* 50. *Lightf.* 139. *Dicks. H. Sicc. fasc.* 12. 12.

THE heathy summits of all the highland mountains of Scotland are clothed with a profusion of this elegant little shrub. We are not certain whether it was first observed by the Rev. Mr. Stuart of Luss, or by any of Dr. Hope's travelling pupils, whose labours so eminently contributed to enrich the *Flora Scotica*. Our specimens were gathered by Mr. Mackay and Mr. G. Don.

The roots are woody, branched and creeping, running deep into the black moory soil among the fissures of rocks. Stems also much branched, procumbent, buried in moss, intricate and tufted, taking root occasionally at their base, clothed with numerous, opposite, small, elliptical, entire, revolute leaves, very smooth shining and evergreen, standing on short broad footstalks, and marked above with a longitudinal furrow, beneath by a projecting nerve. The footstalks are often fringed. Flower-stalks forming a sort of terminal umbel, each having a concave bractea at its base, and bearing one flower. Calyx purplish, smooth, regularly five-cleft. Corolla rose-coloured, regular, bell-shaped, with a spreading five-cleft border. Stamina equal and regular, shorter than the corolla. Antheræ violet. Style short, straight. Stigma capitate. Capsule of 5 valves, whose inflexed margins divide it into 5 cells containing many seeds.

The flowers appear early in July. We believe they are inodorous. The capsules ripen in August.

Campanula rotundifolia.

CAMPANULA rotundifolia.
Round-leaved Bell-flower.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* bell-shaped, closed at the bottom by valves bearing the stamina. *Stigma* 3-cleft. *Capsule* inferior, opening by lateral pores.

SPEC. CHAR. Radical leaves kidney-shaped: upper ones linear.

SYN. Campanula rotundifolia. *Linn. Sp. Pl.* 232. *Sm. Fl. Brit.* 235. *Huds.* 95. *With.* 241. *Hull.* 52. *Relh.* 93. *Sibth.* 80. *Abbot.* 48. *Curt. Lond. fasc:* 4. *t.* 21. *Raii Syn.* 277.

YOUNG botanists are not unfrequently puzzled with the name of this *Campanula*, if they find it (as is frequently the case) with only the linear leaves remaining; and indeed when it grows on a rich soil among bushes, the round leaves soon disappear, and a profusion of long narrow ones only clothes the stem. It however teaches an useful lesson, that we ought never to decide upon Nature's works from ill-chosen or solitary specimens, or hasty observations.

It is one of our prettiest wild flowers, found every where on heaths, mouldering walls, and bushy borders of fields, flowering from July to the end of the season. The root is branched and perennial. Herbage smooth, dark green. Stems upright, branched. Lower leaves on long footstalks, kidney or heart-shaped, serrated; those above them ovate or oblong; the rest linear, sessile, mostly entire. Flower-stalks panicled, slender, bracteated. Flowers drooping, quivering to every breeze, sky-blue, rarely white. Teeth of the calyx entire, spreading; in the alpine variety erect, but we can scarcely find that or any other mark hitherto observed sufficient to constitute it a different species.

We suspect poets sometimes take this for the hare-bell. We have somewhere read of

> "The trembling rye-grass and the hare-bell blue"

growing on "mouldering turrets," which could scarcely be the real hare-bell, (see our *t.* 377); and probably the supposed rye-grass might rather be *Bromus sterilis.*

DROSERA rotundifolia.

Round-leaved Sun-dew.

PENTANDRIA Hexagynia.

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Caps.* superior of 1 cell, with 3 valves. *Seeds* many.

SPEC. CHAR. Leaves orbicular, radical, depressed. Footstalks hairy. Stalk bearing a simple racemus.

SYN. Drosera rotundifolia. *Lin. Sp. Pl.* 402. *Sm. Fl. Brit.* 346. *Huds.* 135. *With.* 323. *Hull.* 67. *Relh.* 131. *Sibth.* 106. *Abbot.* 71.

Ros solis folio rotund. *Raii Syn.* 356.

EVERY *Drosera* hitherto discovered grows in boggy situations. Our British species are far from uncommon in very wet black spongy bogs, for the most part over a gravelly or sandy soil. They flower in July and August, and are all, we believe, perennial.

The *rotundifolia* is perhaps the most common. Its root is black and fibrous. Leaves numerous, on hairy footstalks, radical, depressed, and forming a sort of star on the ground or surrounding moss, very conspicuous by their mingled green and red colour, the latter of which chiefly resides in the numerous glandular bristles, each tipped with a clear viscid globule, which ornament the margin and surface of the leaves, and which, by a degree of irritability lately observed by some naturalists, are thought to contract, and to imprison insects, like the Canadian *Dionæa*, a plant of the same Natural Order. This irritability, if it exists, is only to be detected in hot sunny days, nor indeed do the flowers expand in any other weather. A few erect simple naked stalks rise from the crown of the root, each bearing a simple *racemus*, or rather, perhaps, a spike, of white or blush-coloured flowers, with always 5 petals and as many stamina, and 3 pair of spreading recurved styles. The parts of fructification have not been found to vary in number in this species. Sometimes the stalk is reported to be branched.

4.3.9.

Drosera longifolia.

April 1. 1801. Published by Jas. Sowerby, Lond.

1. ROSERA longifolia.

Long-leaved Sun-dew.

PENTANDRIA Hexagynia.

GEN. CHAR. *Cal.* 5-cleft. *Pet.* 5. *Caps.* superior, of 1 cell, with 3 valves. *Seeds* many.

SPEC. CHAR. Leaves obovate, radical, upright. Stalk bearing a simple racemus.

SYN. Drosera longifolia. *Linn. Sp. Pl.* 403. *Sm. Fl. Brit.* 347. *Huds.* 135. *With.* 324. *Hull.* 67. *Relh.* 132. *Abbot.* 72. *Dicks. H. Sicc. fasc.* 14. 9.

Ros solis folio oblongo. *Raii Syn.* 356.

THIS species is found in the same situations as the *D. rotundifolia,* though somewhat less frequently, and flowers at the same season.

In root and general habit it altogether agrees with the former, differing chiefly in its leaves, which are not depressed, but nearly erect, standing on long stalks, and their form is exactly obovate, not orbicular. For another mark of distinction we are obliged to Dr. Hull, (who has enriched his *Flora* with several good observations on the genus,) that the footstalks of the leaves in the *rotundifolia* are hairy; in this and the *anglica* they are smooth, and we find this difference constant. The styles of the *longifolia,* according to this author, vary from 6 to 8 full as often as in *D. anglica.* The petals and stamina also are frequently 6.

Caulescent varieties of this and the preceding have been found by the late Dr. Withering, whose specimens are now before us, as well as by the present worthy botanical Professor of Oxford. Dr. Hull mentions only the *longifolia* in such a state. We are persuaded these are merely varieties, in which we are confirmed by the analogy of *Carduus, Carlina* and *Onopordum,* (some would add *Primula,*) in which species that are truly *acaules* become caulescent by luxuriant nourishment.

Drosera anglica.

April 1. 1804. Published by Jas Sowerby London.

DROSERA anglica.

Great Sun-dew.

PENTANDRIA Hexagynia.

GEN. CHAR. *Cal.* 5-cleft. *Pet.* 5. *Caps.* superior, of 1 cell, with 3 valves. *Seeds* many.

SPEC. CHAR. Leaves oblong, obtuse, radical, upright. Styles eight. Capsules with four valves.

SYN. Drosera anglica. *Huds.* 135. *Sm. Fl. Brit.* 347. *With.* 324. *Hull.* 68. *Abbot.* 72. *Dicks. H. Sicc. fasc.* 2. 7.

Rorella longifolia maxima. *Raii Syn.* 356.

LINNÆUS has not noticed this species. It is by far less frequently met with than either of the others. We have gathered it in Norfolk, and have received it from the Rev. Mr. Abbot, as well as from Dr. Hull. It is most nearly related to the *D. longifolia,* but is generally twice as large. Dr. Hull thinks it not more frequently furnished with 8 styles than that species. We have however found 8 petals and as many stamina in some plants, a number exceeding any observed in the *longifolia.* The more elongated form of the capsule mentioned by Dr. Hull promises to be a good discriminative mark, but we have not had an opportunity of observing it. The base of the flower-stalk being curved or straight, seems to us variable.

The most certain character of this species seems to consist in the oblong and almost linear form of its leaves, which we have not found to vary. Our opinion is confirmed by the observations of the Rev. Mr. Forby, who finds both these plants in the same situation, and even entangled together, but always retaining this difference in their foliage, however the parts of fructification may vary in number.

Some theoretical doctors of old, seeing the perpetual moisture on the Sun-dew even in the greatest heat, thought it would be a good medicine for consumptive patients, whose moisture they supposed to be drying up. But good old Gerarde confesses that those who took this new restorative died the soonest; which is no wonder, considering its acrid nature.

Psora decipiens.

LICHEN decipiens.

Stellated Ground Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crustaceous; the fronds separate, roundish, rather concave, tawny-red; white at the margin and underneath. Shields marginal, convex, black.

SYN. Lichen decipiens. *Hedwig. Crypt. v.* 2. *t.* 1. *f.* B. *Achar. Prod.* 96. *With. v.* 4. 26. *Hull.* 293.

L. stellatus. *Relh.* 430.

Psora decipiens. *Hoffm. Pl. Lich. t.* 43. *f.* 1—3.

WE have received specimens of this pretty Lichen, not only from Gogmagog hills by favour of Mr. Relhan, who first found it in Britain, and of Mr. Holme, but even from the highland mountains of Scotland, where the Rev. Mr. Stuart and Mr. Don collected it. The latter is a new station for a plant hitherto supposed peculiar to a calcareous soil.

Its fronds grow on the earth, separate and distinct, not imbricated, though often crowded together as they increase in size. They are concave, roundish or irregularly angular, of a bright reddish or tawny hue when young, with an elegant white edge, so that they might easily be mistaken for shields (see Relhan); whence probably the name *decipiens* given by Ehrhart. The under side is white. In decay the whole frond turns to a dark dirty brown. The real shields are marginal, black, at length convex, and almost globular, frequently remaining after the frond that bears them is turned quite brown and decayed.

This Lichen is well figured and described under the name of *elveloides* by Wulfen in *Jacq. Coll. v.* 3. 103. *t.* 3. *f.* 3.

Squamaria lentigera

May 1 1801 Published by Sam.l Curtis, London.

LICHEN lentigerus.

White Ground Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crustaceous, rounded, lobed and waved, somewhat imbricated, greenish white. Shields a little convex, reddish buff-coloured, with a white margin.

SYN. Lichen lentigerus. *Weber. Goett.* 192. *t.* 3. *Achar. Prod.* 103. *Relh.* 430. *t.* 7. *With. v.* 4. 27. *Hull.* 292.

Psora lentigera. *Hoffm. Pl. Lich. t.* 48. *f.* 1.

A COMPANION of the Lichen represented in our last plate, on the dry chalky heaths and hills of Cambridgeshire, for specimens of which we are obliged to Mr. Relhan and Mr. Holme.

It first appeared as a British species in the *Flora Cantabrigiensis*, accompanied by a figure, and is in its native situations so elegant and striking an object, that we wonder it could escape all preceding writers. It forms roundish patches an inch or two in diameter, consisting of a thickish chalky crust, closely attached to the ground, snow-white within, and frequently so on the upper side, though generally tinged (when moist) with a pale green hue, particularly near the circumference, which is crenate lobed and undulated, the very edge being pure white. The whole plant has, as Weber expresses it, a kind of porcelain-like brilliancy. The shields are numerous, moderately raised, with a slightly convex disk of a waxy brownish buff-colour, surrounded by a white border. By age apparently they become sprinkled with little black protuberances, which should seem to be the seeds; and yet we have found them on some shields whose small size, and therefore probably tender age, scarcely authorised this opinion, and would rather induce a suspicion of these black substances being parasitical.

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Usnea florida?

Sowerby del. et lith. Published by T. Sowerby, London.

LICHEN floridus.
Flowery Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Filamentous, furnished with a central thread, much branched, erect, greenish gray; branches spreading, round, fibrous, warty, bearing broad flat shield-like radiated dilatations, of their own colour. Tubercles on the branches, lateral, flesh-coloured, rugged.

SYN. Lichen floridus. *Linn. Sp. Pl.* 1624. *Huds.* 560. *With. v.* 4. 50. *Hull.* 307. *Relh.* 440. *Dicks. H. Sicc. fasc.* 11. 25. *Achar. Prod.* 224.
Usnea vulgatissima tenuior et brevior, cum orbiculis. *Dill. Musc.* 69. *t.* 13. *f.* 13.
Muscus arboreus cum orbiculis. *Raii Syn.* 65.

GATHERED at Hafod, Cardiganshire. It chiefly grows on dead branches, but the radiated disks are seldom found, except on the higher trees in old woods; and the tubercles, or real fructification, having never before been even suspected to exist, are here first presented to the curious botanist.

The stems form upright bushy pale greenish tufts, rising from a hard black base, and are round, composed of a crustaceous bark, enclosing a tough white fibre. They divide into innumerable compound spreading taper branches, polished, but minutely warty, which, when perfect, bear large flattish thin dilatations, of nearly their own colour, at first lateral, but soon appearing terminal, the branch above them becoming reflexed and confounded with the numerous radiating spines with which their irregular border is fringed. Tubercles on the younger branches lateral, small, prominent, flesh-coloured, rugged, very rarely surrounded with a few spines.

May these radiated disks be abortive flowers? The tubercles are surely the real ones. Many botanists, even Dr. Acharius, suppose the common *L. hirtus* to be this plant without fructification. Ray thought otherwise, and we suspect him to be right; for we have some American specimens of *hirtus* with flesh-coloured tubercles growing *on the main stem*, not on the branches, which may afford a specific difference. Perhaps some fortunate observer may detect these in England. *L. comosus* of Acharius seems still distinct from both these species.

Eriophorum
vaginatum

ERIOPHORUM vaginatum.

Hare's-tail Cotton-grass.

TRIANDRIA Monogynia.

GEN. CHAR. *Glumes* chaffy, imbricated on all sides. *Cor.* none. *Seed* 1, invested with very long hairs.

SPEC. CHAR. Stem round, invested with a tubular sheath. Spike solitary. Glumes membranous.

SYN. Eriophorum vaginatum. *Linn. Sp. Pl.* 76. *Sm. Fl. Brit.* 58. *Huds.* 22. *With.* 71. *Hull.* 14. *Curt. Lond. fasc.* 4. *t.* 10. *Dicks. H. Sicc. fasc.* 4. 3.

Juncus alpinus cum caudâ leporinâ. *Raii Syn.* 436.

THE Hare's-tail or Single-headed Cotton-grass is not unfrequently seen on the high barren heathy moors of the north of England, but it is rather remarkable that so mountainous a plant should have been found near Croydon by Sherard, and between Grimstone and Lynn, Norfolk, by Mr. Pitchford. Its silvery-blue flowering spikes, with the yellow antheræ a little projecting between the scales, are observable in March; but the plant becomes much more conspicuous in May and June, when the snow-white clusters of hair that encompass the seeds form a dense oval tuft, not unaptly compared to a hare's tail. The roots are perennial. Stems erect, straight, clothed with one or two cylindrical, swelling, membranous blunt sheaths, often tipped with a small point, from whence originated the trivial name *vaginatum*. The leaves are straight, linear, somewhat triangular, smooth, upright, sheathing at their base.

The larger size of the spike, and especially the sheath of the stem, sufficiently distinguish this species from *E. alpinum* represented in our 5th volume.—Sheep are said to be very fond of it. See Curtis.

Panicum verticillatum.

PANICUM verticillatum.

Rough Panick-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 3 valves, single-flowered; the third valve very small. *Seed* invested with the permanent hardened corolla.

SPEC. CHAR. Spike whorled; spikelets in fours. Involucra of two bristles, rough with reversed teeth, and embracing a single flower.

SYN. Panicum verticillatum. *Linn. Sp. Pl.* 82. *Sm. Fl. Brit.* 64. *Huds.* 24. *With.* 114. *Hull.* 15. *Curt. Lond. fasc.* 4. *t.* 6.

Gramen paniceum, spicâ asperâ. *Raii Syn.* 394.

FOUND occasionally in cultivated fields, particularly such as are somewhat moist. We believe no place in England is so certainly known to produce it as the neighbourhood of Battersea, from whence this specimen was taken. It is merely a botanical curiosity, being an useless, if not a noxious, weed to the agriculturist. It is annual, flowering in July or August.

Root fibrous. Stems widely spreading, leafy, rough above, from 6 to 24 inches high. Leaves lanceolate, harsh, very rough on the margin, pointed, with a fringed stipula crowning the inside of their sheath. Spike solitary, terminal, erect, green with a purplish tinge, composed of many whorled spikelets, four in a whorl when the plant enjoys a competent share of nutriment, and each consisting of several flowers. *Involucra* of 2 bristles to each flower, not reaching far beyond the flowers, and these bristles are very rough with little sharp teeth *pointing backwards*, by which curious mark this is always, in however dwarf a state, clearly distinguishable from *P. viride*, as Mr. Curtis first observed. For want of attention to this circumstance, the plant was formerly thought a luxuriant variety of the *viride*, and I confess myself to have neglected it in writing the *Flora Britannica*, having but lately discovered in my own herbarium specimens of the real *verticillatum* gathered near Norwich along with the *viride*. Other botanists have very generally fallen into the same error.

Panicum viride.

PANICUM viride.

Green Panick-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 3 valves, single-flowered; the third valve very small. *Seed* invested with the permanent hardened corolla.

SPEC. CHAR. Spike cylindrical; spikelets crowded. Involucra of several bristles, rough with erect teeth, and embracing two flowers.

SYN. Panicum viride. *Linn. Sp. Pl.* 83. *Sm. Fl. Brit.* 65. *Huds.* 24. *With.* 115. *Hull.* 15. *Curt. Lond. fasc.* 4. *t.* 5.

Gramen paniceum, spicâ simplici lævi. *Raii Syn.* 393.

THIS is also a native of cultivated ground, but generally in more dry and sandy places than *P. verticillatum*, nor is it esteemed so rare as that species. We gathered it at Battersea, and have found it about Norwich. It is annual, flowering at the same time with the preceding, and is of as little value to the farmer.

Root fibrous. Stems spreading, from 3 to 18 inches high, leafy, rough above. Leaves and stipulæ much like the last. Spike green or purplish, composed of short, crowded, irregularly-placed spikelets, not whorled. Flowers generally in pairs, surrounded by *involucra* which greatly exceed them in length, and which are composed of about 6 bristles, rough with *erect teeth*, not reflexed as in *P. verticillatum*, and the same difference is observable in the roughness of the upper part of the stem in each, so that they can never be confounded with each other. Indeed the different lengths of the bristles will pretty certainly serve to distinguish them at first sight.

Notwithstanding the above characters, the Linnæan herbarium affords reason to doubt whether Linnæus was well acquainted with the limits of these two species.

Panicum crus-galli.

PANICUM Crus-galli.

Loose Panick-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 3 valves, single-flowered; the third valve very small. *Seed* invested with the permanent hardened corolla.

SPEC. CHAR. Spike doubly compound; its stalk mostly five-angled: spikelets alternate or in pairs, subdivided. Calyx bearded, rough.

SYN. Panicum Crus-galli. *Linn. Sp. Pl.* 83. *Sm. Fl. Brit.* 65. *Huds.* 24. *With.* 115. *Hull.* 15. *Curt. Lond. fasc.* 4. *t.* 8.

Gramen paniceum, spicâ divisâ. *Raii Syn.* 394.

GATHERED at Battersea with the two last described. They are all reckoned among our most rare British grasses. They certainly cannot easily be overlooked, especially that now before us, which flowers at the same time with the preceding, and is likewise annual.

Root fibrous. Stems strong, erect or spreading, 2 feet high or more, leafy, striated, smooth. Leaves long and broad, rough, with swelling sheaths, without stipulæ. Spikes erect, twice compound, being formed of spreading branches generally leaning to one side, standing either alternately or in pairs, and each composed of several thick-set lobed spikelets. The common spike-stalk is rough, and more or less constantly 5-angled; which however varies according to its luxuriance. Flowers nearly sessile, without involucra. Calyx ribbed, bristly, its 2 larger glumes either with or without awns, which are rough with erect teeth, and very various in length. Corolla extremely polished and even, tipped with a little point, now and then downy at the summit. A thin elliptical membrane is clapped close to the inner valve of the corolla on the outside, which Dr. Stokes (*With. ed.* 2. 55.) considers as a fourth valve of the calyx, no doubt justly, and mentions having seen it in the *viride* and some other species. We have not however been equally successful in this respect.

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196.

DIPSACUS pilosus.

Small Teasel.

TETRANDRIA Monogynia.

GEN. CHAR. *General calyx* of many leaves; *partial* superior, of one leaf. *Receptacle* chaffy. *Seed-crown* cup-shaped.

SPEC. CHAR. Leaves on footstalks, with an appendage at each side. General calyx reflexed, equal in length to the head of flowers.

SYN. Dipsacus pilosus. *Linn. Sp. Pl.* 141. *Sm. Fl. Brit.* 169. *Huds.* 61. *With.* 182. *Hull.* 33. *Relh.* 59. *Sibth.* 54. *Abbot.* 29. *Curt. Lond. fasc.* 1. *t.* 10.

D. minor, seu Virga pastoris. *Raii Syn.* 192.

IN moist shady waste ground on a calcareous soil the Small Teasel or Shepherd's Staff sometimes occurs, but is far from being a general plant. It flowers in August and September.

Root spindle-shaped, biennial. Stem 3 or 4 feet high, erect, branched, spreading, angular, very rough with ascending hooked prickles. Leaves opposite, spreading, on foot-stalks, ovate, pointed, serrated, accompanied by a pair of small leaflets at their base. Flowers white, in round, terminal, long-stalked heads. Common calyx of several equal, reflexed, lanceolate, pointed leaves, fringed with hairs, as are also the white straight scales that separate the flowers. Corolla funnel-shaped, irregularly five-lobed, hairy. Stamina twice as long as the corolla, with purple antheræ. Crown of the seeds fringed.

This is too rare a plant to incommode the farmer; neither has it been, on the contrary, applied to any useful purpose. As an ornamental flower it has little claim to a place in the garden.

May 1. 1841. Published by the Society. London.

SCABIOSA succisa.

Devil's-bit Scabious.

TETRANDRIA Monogynia.

GEN. CHAR. *General calyx* of many leaves; *partial* double, superior. *Receptacle* chaffy or naked.

SPEC. CHAR. Corollas four-cleft, regular. Stem-leaves toothed. Heads of flowers nearly globular.

SYN. Scabiosa succisa. *Linn. Sp. Pl.* 142. *Sm. Fl. Brit.* 170. *Huds.* 62. *With.* 183. *Hull.* 33. *Relh.* 59. *Sibth.* 55. *Abbot.* 29. *Curt. Lond. fasc.* 3. *t.* 10.

S. radice succisâ, flore globoso. *Raii Syn.* 191.

THE species of Scabious represented in the annexed plate occurs very frequently and abundantly in grassy pastures that are somewhat moist, both on low commons and even on hilly spots, flowering from August to October inclusive.

Root perennial, oblong, abruptly bitten off at the lower end. Stem erect, round, leafy, bearing for the most part 3 or more flowers. Leaves dark-green, rather coriaceous, harsh and hairy; the radical ones ovate, bluntish and entire; a pair or two on the stem often remotely toothed; the uppermost smaller and entire. Flowers dark purplish blue (frequently milk-white), in roundish heads, standing on long terminal flower-stalks, the central one being the most considerable. The hairs on these stalks, even below the floral leaves, point upwards, while all those on the main stem are reflexed downwards. Calyx hairy. Florets nearly equally four-cleft. Seeds crowned with bristles.

The origin of the name Devil's-bit is curious; for the old writers tell us, the superstitious vulgar supposed the root had been bitten off by the devil, for envy of the benefit its medicinal virtues might render to mankind. Hence alone, it seems those virtues were presumed; and in proportion as the devil and his operations are little thought of, they have fallen into oblivion in our unbelieving days.

Parietaria officinalis.

PARIETARIA officinalis.

Pellitory of the Wall.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* four-cleft, inferior. *Cor.* none. *Stamina* elastic. *Seed* one, clothed with the lengthened calyx.

Some flowers female only, whose calyx remains unchanged.

SPEC. CHAR. Leaves lanceolate-ovate, without lateral ribs at the base. Segments of the involucrum ovate. Stem ascending.

SYN. Parietaria officinalis. *Linn. Sp. Pl.* 1492. *Sm. Fl. Brit.* 189. *Huds.* 442. *With.* 201. *Hull.* 226. *Relh.* 378. *Sibth.* 62. *Abbot.* 218. *Curt. Lond. fasc.* 4. *t.* 63.

Parietaria. *Raii Syn.* 158.

AN inhabitant of rubbish and old walls in sheltered places; for it is more impatient of cold than many of our wild plants, and its juicy stems perish at the first attack of frost. The flowers are abundant from June to the end of autumn.

Root perennial. Stem bushy, ascending, spreading, angular, leafy, smooth, very shining and generally red. Leaves alternate, on stalks, of a lengthened or sharp-ovate figure, obliquely twisted, entire, a little hairy, pale beneath, the lateral nerves all springing from the main rib considerably above the base of the leaf, in which this differs from some foreign species. Flowers axillary. Each involucrum cut into 7 ovate segments, and containing 3 flowers, all producing fertile seeds, though the central one, having no stamina, is impregnated by its neighbours. Stamina curiously jointed or wrinkled, starting back elastically when once touched, and so discharging the pollen with great force. Stigma pencilled. Seed ovate, smooth, shining, invested with the four-cleft calyx, which in the 2 lateral blossoms is remarkably lengthened out after flowering.

This is reckoned among the emollient herbs by writers on the Materia Medica, and indeed is of a mucilaginous quality, though inferior in that respect to the Mallow tribe.

Sagina procumbens.

SAGINA procumbens.

Procumbent Pearlwort.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* 4-leaved. *Petals* 4. *Capsule* of 1 cell.

SPEC. CHAR. Stems procumbent, smooth. Petals very short.

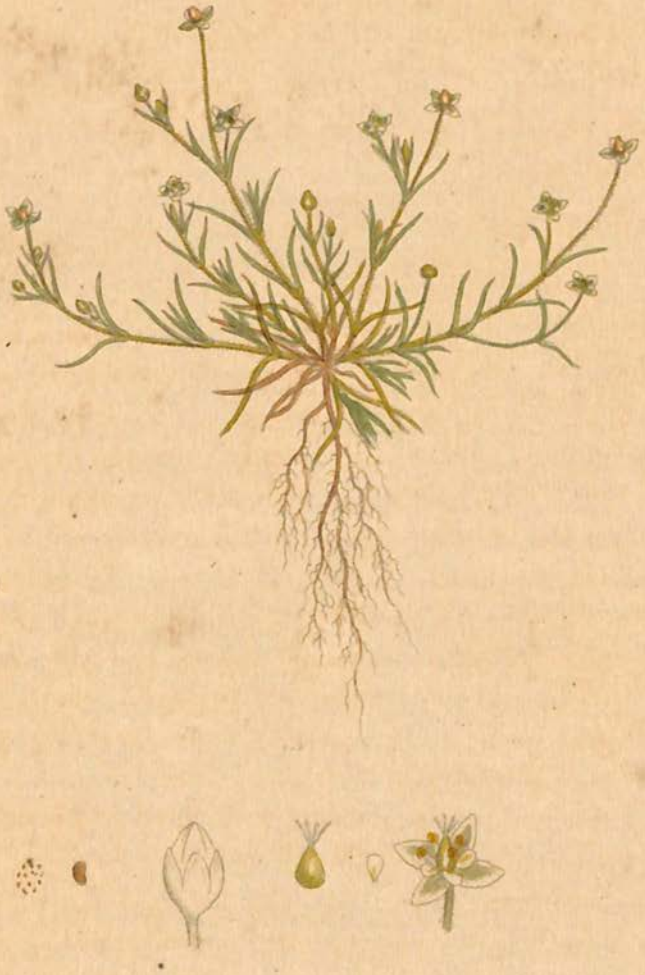
SYN. Sagina procumbens. *Linn. Sp. Pl.* 185. *Sm. Fl. Brit.* 199. *Huds.* 73. *With.* 215. *Hull.* 38. *Relh.* 73. *Sibth.* 66. *Abbot.* 39. *Curt. Lond. fasc.* 3. *t.* 12.

Alsinella muscoso flore, repens. *Raii Syn.* 345.

NOTHING can be more common than this humble weed in sandy waste places, neglected walks of gardens, and the interstices of paved courts, where its flowers are to be seen in plenty from May to the end of autumn, provided the plant be not entirely burnt up by the summer's sun.

Root perennial, small and fibrous. Stems several, procumbent, smooth, taking root at their joints, and, according to Mr. Curtis's observations, constantly remaining with their leaves green through the winter. Leaves opposite, and even connate, linear, convex beneath, entire, smooth in every part, tipped with a minute point. Flower-stalks axillary, solitary, simple, smooth, longer than the leaves, each bearing a small nodding flower. Calyx of four spreading elliptical blunt leaves. Petals white, roundish, but half the length of the calyx, entire. Capsule ovate. Seeds small, reddish brown, of a wedge-like, or somewhat of a kidney form.

The old name *Sagina*, from *sagino* to cram or fatten, which appears to have belonged to some kind of corn, as Millet, or *Sorghum*, is but ill applied to this little plant, and indeed seems to have descended to it by chance, having been first joined as an adjective to *Alsine* (on which indeed several animals do feed), and then for want of a better denomination retained for the present genus when separated from *Alsine*, *Spergula*, &c.



Sagina apetala.

SAGINA apetala.

Annual Small-flowered Pearlwort.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* 4-leaved. *Petals* 4. *Capsule* of 1 cell.

SPEC. CHAR. Stems nearly upright, hairy. Petals obsolete.

SYN. Sagina apetala. *Linn. Mant.* 2. 559. *Sm. Fl. Brit.* 199. *With.* 216. *Hull.* 38. *Sibth.* 67. *Abbot.* 39. *Curt. Lond. fasc.* 5. *t.* 14. *Dicks. H. Sicc. fasc.* 3. 6.

Saxifraga anglica alsinefolia annua. *Raii Syn.* 345.

THIS species of *Sagina* is scarcely less frequent than the preceding, but generally found in more dry barren and open places, flowering in May and June.

Root constantly annual. Stems nearly upright, or if they spread they never take root: they differ moreover from those of the last in being clothed with short scattered hairs. Leaves also frequently hairy, and always (we believe) fringed at the base. Flower-stalks slender, often, but not always, hairy. Petals white, very minute, and often altogether wanting; frequently they are notched. Seeds generally marked with a black line on their outward edge, but this is not absolutely invariable.

Our specimens precisely accord with those of Linnæus sent by Professor Arduino; though we should hardly have recognized his figure (*Spec. Adv. Bot.* 2. *t.* 8. *f.* 1.), which is by no means expressive. Linnæus appears not to have been practically acquainted with the differences between these two species, and he certainly confounded *Spergula subulata*, *Fl. Brit.* with the former.

Jasione montana.

May 1 1801 Published by Sol Sowerby London

JASIONE montana.

Sheep's-bit, or Sheep's Scabious.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped, deeply divided into 5 linear segments. *Stigma* club-shaped, notched. *Antheræ* united at the base. *Caps.* inferior, imperfectly 2-celled, bursting at the top.

SPEC. CHAR. . . .

SYN. Jasione montana. *Linn. Sp. Pl.* 1317. *Sm. Fl. Brit.* 241. *Huds.* 377. *With.* 247. *Hull.* 190. *Relh.* 328. *Sibth.* 85. *Abbot.* 189. *Curt. Lond. fasc.* 4. *t.* 58.

Rapunculus Scabiosæ capitulo cæruleo. *Raii Syn.* 278.

THE pretty blue flowers of the Sheep's Scabious are conspicuous in dry sandy fields and pastures in the middle of summer, and in autumn the bladdery little capsules remain some time after their seeds are scattered. It has obtained the name of Scabious from its resemblance to the genus properly so called, a resemblance which is merely external, for the *Jasione* is next akin to *Lobelia*, *Campanula*, and *Phyteuma* in qualities and botanical characters, being indeed distinguished from the latter only by the cohesion of its antheræ, and by the fruit being but imperfectly 2-celled, the partitions not reaching to the central column as in all others of this natural order.

The root is tapering, a little woody though annual. Stems several, spreading, scarcely a foot high, leafy, roundish, rough, branched above. Leaves oblong, blunt, waved, entire, rough; those on the stem alternate. Flowers blue, forming hemispherical heads, each of which stands on a permanent common calyx of many leaves; but every flower has its own partial stalk, and a five-toothed superior calyx. Dr. Persoon has observed (see Hull) that the central flowers only have fertile *antheræ*, with barren club-shaped *stigmata*, while the flowers of the circumference have barren *antheræ*, with proper cloven *stigmata*, and that these alone ripen seed. It is certain the central flowers with us are often abortive, and the *stigmata* more or less club-shaped, but always notched in some degree, nor do we see either kind of stigma strictly confined to any particular set of flowers.

Euphorbia helioscopia.

EUPHORBIA helioscopia.

Sun Spurge.

DODECANDRIA Trigynia.

GEN. CHAR. *Cal.* of 1 leaf, inflated, inferior. *Nectaries* 4 or 5, standing on the calyx. *Capsule* stalked, 3-lobed.

SPEC. CHAR. Umbel five-cleft, then three-cleft and forked. Partial involucra obovate. Leaves wedge-shaped, serrated.

SYN. Euphorbia helioscopia. *Linn. Sp. Pl.* 658. *Sm. Fl. Brit.* 516. *Huds.* 209. *With.* 449. *Hull.* 105. *Relh.* 185. *Sibth.* 152. *Abbot.* 105. *Curt. Lond. fasc.* 1. *t.* 36.

Tithymalus helioscopius. *Raii Syn.* 313.

A VERY common weed in cultivated land, known to country people by the name of Wart-wort, (sometimes corrupted into Rat-weed), the acrid milky juice being used to take off warts from the skin; but it sometimes causes dangerous inflammation. When such an accident happens, oil plentifully applied is the best cure.

The herb is annual, flowering in July and August, when its umbel being always turned to the sun has procured it the name *helioscopia*, a sun-gazer, a name equally applicable to the generality of flowers. The main stem is upright, round, furnished at the base with lateral branches, except in a very starved state. Leaves scattered, wedge-shaped or obovate, smooth, tender, serrated towards the top. Umbel of 5 spreading rays, which are three-cleft, and then forked. The general and partial *involucra* resemble the leaves. Calyx as in the rest of the genus. Nectaries 4, roundish and entire, at first green, then yellow. Capsule quite destitute of warts or pubescence.

Galeopsis Ladanum.

GALEOPSIS Ladanum.
Red Hemp-Nettle.

DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 5-cleft, awned. Upper lip of the *corolla* notched, vaulted: lower with 2 teeth on its upper side.

SPEC. CHAR. Stem not swelled below the joints. Leaves lanceolate, more or less serrated, hairy. Upper lip of the corolla slightly notched.

SYN. Galeopsis Ladanum. *Linn. Sp. Pl.* 810. *Sm. Fl. Brit.* 628. *Huds.* 256. *With.* 528. *Hull.* 132. *Relh.* 227. *Sibth.* 184. *Abbot.* 129.
Sideritis arvensis rubra. *Raii Syn.* 242.

A NATIVE of dry gravelly, or more especially chalky, cornfields, flowering in August and September. It is not mentioned by Mr. Lightfoot as growing in Scotland, but we have received from A. Bruce, Esq., specimens gathered in that country on dry limestone rubbish.

Root annual, fibrous. Stem about a foot high, oppositely branched, square, most hairy upwards with deflexed hairs, of an equal thickness throughout, often red. Leaves on stalks, lanceolate or inclining to ovate, more or less serrated; veins hairy beneath: the upper side clothed with close-pressed scattered hairs. Calyx hairy or woolly, the teeth pungent, the hairs often glandular and viscid. Corolla of a rose-colour, variously intermingled with crimson and white, hairy, the upper lip but slightly crenate. The Rev. Mr. Forby has found the terminal flower sometimes regularly four-cleft, as in *G. Tetrahit*, see *t.* 207.

Our specimen here figured, as well as those from Scotland, agrees in the form and serratures of the leaves with those in the Linnæan herbarium. In Norfolk a variety with narrower and almost entire leaves is most frequent.

Carex pilulifera.

CAREX pilulifera.

Round-headed Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none.

Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Bracteæ not sheathing. Female spikes sessile, clustered, roundish. Glumes tipped with a small point. Fruit roundish, downy.

SYN. Carex pilulifera. *Linn. Sp. Pl.* 1385. *Sm. Fl. Brit.* 995. *Gooden. Tr. of L. Soc. v.* 2. 190. *Huds.* 408. *With.* 105. *Hull.* 208. *Relh.* 353. *Sibth.* 29. *Abbot.* 204. *Dicks. II. Sicc. fasc.* 9. 12.

C. montana. *Linn. Sp. Pl.* 1385.

Gramen cyperoides spicis brevibus congestis, folio molli. *Raii Syn.* 421.

G. cyperoides tenuifolium, spicis ad summum caulem sessilibus globulorum æmulis. *Pluk. Phyt. t.* 91. *f.* 8. *Raii Syn.* 422.

COMMON on heaths and moorish ground, flowering in April and May.

Root fibrous, perennial. Stem generally recumbent, weak, naked, triangular, rough upwards, from 6 to 12 inches high. Leaves bright green, roughish at the edges and keel. Bracteæ narrow, short, sessile without any perceptible sheath. Male spike solitary, lanceolate, with pointed glumes; female 2 or 3, sessile, near each other, roundish (not oblong) especially in fruit, their glumes ovate, acute, more or less pointed. Tunic of the seed shorter than the glumes, roundish, or slightly triangular, pointed, green, clothed with thick short down.

Linnæus adopted this *Carex* from Plukenet, without a specimen, calling it *pilulifera*, and at the same time described it over again from a specimen by the name of *montana*. It is remarkable that Ray appears to have made a similar mistake. We prefer *pilulifera* as the most apt denomination.

Castanea vulgaris.

Sowerby del. et lith. Published by Jas Sowerby, London.

FAGUS Castanea.

Chesnut-tree.

MONOECIA Polyandria.

GEN. CHAR. Male, *Cal.* bell-shaped, 5-cleft. *Cor.* none. *Stam.* 5 to 12.

Female, *Cal.* 4-cleft. *Cor.* none. *Styles* 2 or 3, three-cleft. *Seeds* 2 or 3, invested with the leathery prickly calyx.

SPEC. CHAR. Leaves lanceolate, sharply serrated, smooth beneath. Prickles of the fruit compound and entangled.

SYN. Fagus Castanea. *Linn. Sp. Pl.* 1416. *Huds.* 422. *With.* 443. *Hull.* 213. *Abbot.* 211.

Castanea. *Raii Syn.* 440.

THE Chesnut is the most stately of all our native trees, for it is certainly a native of the south and western parts of this island; it appears to be also the most long-lived; for a chesnut, known to have been a boundary tree in the time of King John, still continues to bear fruit at Tortworth, Gloucestershire, and we have been favoured with its blossoms by Lady Viscountess Cremorne. Its trunk is 15 feet in diameter. Noble specimens of the chesnut may also be seen in Ipswich park, and even in Kensington gardens.

The trunk is known by the deep wide clefts in its bark. The branches spread to a great extent. The foliage, less rich and tufted than that of the oak, is distinguished by a lucid brilliancy, and a peculiar sharpness owing to the long, veiny, and acutely serrated form of the leaves. The flowers appear in May in long pendulous downy spikes, being gathered together in sessile tufts upon a common simple stalk. Stamina capillary, about 12 or more to each calyx, without pistilla, which grow on a different spike, 2 or 3 to each flower. Stigmas 3, awl-shaped, rigid, permanent. Seeds generally 2, invested with the calyx greatly enlarged, and defended with complicated prickles. They ripen in September, and afford a grateful food to several animals as well as to mankind. In Italy and Spain they are much used.

2210.

Peltidea venosa

June 1. 1801. Published by Jas Sowerby London

LICHEN venosus.

Green Veiny Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leathery, roundish; green and even above; marked beneath with longitudinal branching brown prominent veins. Shields anterior, marginal, horizontal, round, dark-brown, with an entire brown margin.

SYN. Lichen venosus. *Linn. Sp. Pl.* 1615. *Achar. Prod.* 159. *Huds.* 546. *With. v.* 4. 69. *Hull.* 299. *Lightf.* 844. *Dicks. H. Sicc. fasc.* 10. 25.
Lichenoides parvum virescens, peltis nigricantibus planis. *Dill. Musc.* 208. *t.* 28. *f.* 109.
Peltigera venosa. *Hoffm. Pl. Lich. t.* 6. *f.* 2.

THIS curious little *Lichen* has been found, though rarely, in some parts of Scotland, from whence Mr. Mackay favoured us with specimens; but those in the annexed plate are the first known to be of English growth, having been gathered by Dr. J. Babington close to the town of Ludlow, and they are among the finest we have ever seen. Dillenius appears to have found the *L. venosus* but once in his life, in a wood near Giesen in Hesse. It grows in moist shady spots, on the ground.

The fronds are small, leathery, ascending, rooted at their base only, dilated upward into a wedge-like or roundish form, scarcely more than half an inch (rarely an inch) long, slightly waved and lobed. Their upper surface is perfectly even and smooth, of a fine green when fresh, brown or grayish when dry; the under side downy, white, marked with numerous, longitudinal, prominent (though flat), branching, brownish veins. Shields several, marginal, but most connected with the upper surface, sessile, round, dark, reddish brown, flat, surrounded with an even margin of the same hue, which disappears as they grow old.

Peltidea horizontalis.

June 1. 1801. Published by Jas. Sowerby. London.

LICHEN horizontalis.

Brown Horizontal Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

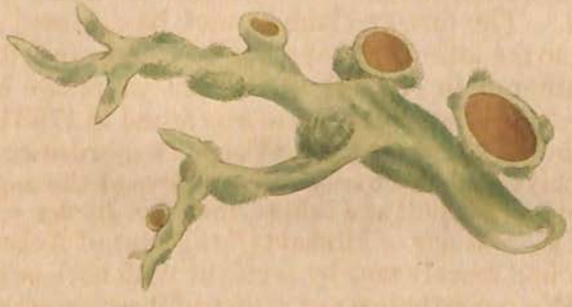
SPEC. CHAR. Leathery, spreading, lobed, polished, glaucous greenish brown; beneath covered with a network of brown veins. Shields standing on small lobes, sessile, anterior, horizontal, round, reddish, with a pale notched border.

SYN. Lichen horizontalis. *Linn. Mant.* 132. *Achar. Prod.* 160. *Huds.* 548. *With. v.* 4. 72. *Hull.* 300. *Lightf.* 849. *Abbot.* 267. *Dicks. H. Sicc. fasc.* 16. 24.
Lichenoides subfuscum, peltis horizontalibus planis. *Dill. Musc.* 205. *t.* 28. *f.* 104.

FOUND on moist mossy rocks in woods in the mountainous parts of Great Britain not unfrequently. We received it from the Rev. H. Davies of Aber, North Wales.

It may seem wonderful that Linnæus should ever have confounded this with *L. venosus*, which nevertheless appears by his herbarium to have been the case, nor did he describe the *horizontalis* till the publication of his *Mantissa* in 1767.

The fronds creep on the moist earth among mosses and grass, and are of no determinate form, but variously lobed. Their upper surface is a little pitted, but otherwise smooth and polished, of a glaucous or greenish brown, sometimes sprinkled with a few mealy warts; the under downy, covered almost to the edge with a tolerably regular network of brown broad veins, leaving white oblong spaces in their interstices, and producing here and there a black tufted radicle which fixes itself to the ground. Shields generally solitarily placed on little elongations of the frond, horizontal, flat, roundish, red-brown, surrounded with a crenate border of the colour of the leaf on which they grow.



Ramalina farinacea?

Published by Jas Sowerby London

LICHEN farinaceus.

Ragged Mealy Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leafy, much-branched, upright, leathery, glaucous-ashcoloured, smooth, pitted; the branches tapering, studded with lateral, convex, pale, mealy warts. Shields scattered, stalked, flat, pale-buff.

SYN. Lichen farinaceus. *Linn. Sp. Pl.* 1613. *Achar. Prod.* 177. *Huds.* 540. *With. v.* 4. 50. *Hull.* 295. *Lightf.* 833. *Sibth.* 329. *Abbot.* 265. *Dicks. H. Sicc. fasc.* 17. 23. *Relh.* 432. *sub n.* 872.
Lichenoides segmentis argutioribus, ad margines verrucosis et pulverulentis. *Dill. Musc.* 172. *t.* 23. *f.* 63.

A VERY common *Lichen* on the branches of most kinds of trees, but the shields are so rarely found, that Dr. Acharius supposes himself the first who has described or even observed them. The former claim cannot be disputed; but, with respect to the latter, we have fine specimens in full fructification gathered in Norfolk at least 20 years ago by the Rev. H. Bryant. That in our plate was found in 1799 by the Rev. C. Abbot in Clapham Park Wood, Bedfordshire. Mr. Bryant conceived his discovery only confirmed the supposition of Dillenius, Scopoli and others, that this *Lichen* was the other sex of *L. calicaris* of Hudson (*fastigiatus* of Acharius), and that he had merely met by accident with both sexes on one plant. We nevertheless are rather of the opinion of Dr. Acharius, who keeps them separate, and we shall endeavour in this and the following plate to distinguish them.

L. farinaceus forms spreading much-branched tufts; its segments vary in breadth, but are generally very narrow, acute, flattish, pitted, of a pale glaucous gray, smooth, except for the numerous irregular powdery cracks or warts on their edges or sides, which constitute the essential distinction of this species, and which in drying become almost white. The shields are flat, of a very pale buff, surrounded when young with an entire border of the colour of the leaf.

Ramalina fastigiata.

June 1. 1801. Published by Jas. Sowerby. London.

LICHEN fastigiatus.

Ragged Beaked Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leafy, much-branched, upright, leathery, glaucous-buff, smooth, pitted, without warts; the branches terminating in a curved beak. Shields numerous, scattered, nearly sessile, pale whitish buff.

SYN. Lichen fastigiatus. *Achar. Prod.* 175.
L. calicaris. *Huds.* 540. *With. v.* 4. 51. *Hull.* 296. *Lightf.* 834. *Relh.* 432. *Abbot.* 264.
Lichenoides coralliforme, rostratum et canaliculatum. *Dill. Musc.* 170. *t.* 23. *f.* 62.

THIS, though by far less common than the preceding, is found on trees, chiefly in the most woody and rather mountainous parts of our island. Its near affinity to *L. farinaceus* has already been mentioned, but we shall proceed to show their differences. *L. fastigiatus* is equally tufted and branched, but generally shorter, less soft and flexible; its colour rather more yellowish, verging towards an ivory hue, though sometimes (as Dr. Acharius mentions in the Stockholm Transactions) it becomes ashcoloured; its branches are also broader, and, though pitted, their surface smooth, almost shining, and always destitute of the powdery warts or cracks, so conspicuous in *L. farinaceus*. The shields are copiously produced, each on a broad base, lateral, or most frequently nearly terminal, the pointed summit of the branch beyond them being more or less reflexed: when young they are concave, glaucous-white, with a smooth acute margin; when older they become flat or convex, and of a pale buff.

We take this opportunity of correcting an oversight in *vol.* 10. *t.* 688, of this work. Dr. Acharius rightly observes that *L. scopulorum* is the real *calicaris* of Linnæus, a fact which escaped us before, but to which we now fully assent. The *calicaris* of British authors is that now before us.

Sherardia arvensis.

SHERARDIA arvensis.

Blue Sherardia.

TETRANDRIA Monogynia.

GEN. CHAR. *Cor.* of 1 petal, funnel-shaped, superior. *Seeds 2,* each crowned with *3* teeth.

SPEC. CHAR. All the leaves whorled. Flowers terminal.

SYN. Sherardia arvensis. *Linn. Sp. Pl.* 149. *Sm. Fl. Brit.* 171. *Huds.* 66. *With.* 185. *Hull* 37. *Relh.* 63. *Sibth.* 57. *Abbot* 32. *Curt. Lond. fasc.* 5. *t.* 13. *Dicks. H. Sicc. fasc.* 15. 1.

Rubeola arvensis repens cærulea. *Raii Syn.* 225.

THE *Sherardia,* or Little Field Madder, as it has been commonly called, though it has neither the character nor properties of Madder, is frequent in fallow fields, and indeed even among growing corn, more particularly on a light or gravelly soil, flowering throughout the summer.

The root is fibrous and annual. Herb generally hairy. Stems several, branched, leafy, angular, spreading in every direction. Leaves about 6 in each whorl, elliptical or obovate, pointed, entire, roughest on the edges and keel, spreading. Flowers in a small terminal umbel enveloped with the uppermost whorl, which generally consists of 7 or 8 leaves. Calyx superior, of 2 trifid permanent leaves, at length forming a crown to the fruit. Corolla purplish-blue, with a slender tube gently tapering to the base, and a regular 4-cleft limb. Stamina slender, shorter than the lobes of the corolla. Fruit of 2 dry seeds, mostly roughish.

Dillenius certainly showed his judgment in making this a distinct genus from all the other stellate plants, and it is well characterised by the 2 trifid leaves of the calyx, a mark which M. De Jussieu (possibly from an error of the press) seems to have overlooked.

Plantago Coronopus.

PLANTAGO Coronopus.
Buck's-horn Plantain.

TETRANDRIA Monogynia.

GEN. CHAR. *Cal.* 4-cleft. *Cor.* 4-cleft, inferior; its limb reflexed. *Stamina* very long. *Cap.* with 2 cells, bursting all round.

SPEC. CHAR. Leaves linear, in many pinnate segments. Stalk round.

SYN. Plantago Coronopus. *Linn. Sp. Pl.* 166. *Sm. Fl. Brit.* 185. *Huds.* 64. *With.* 198. *Hull* 34. *Relh.* 62. *Sibth.* 56. *Abbot* 31.

P. foliis laciniatis, Coronopus dicta. *Raii Syn.* 315.

β. P. gramineo folio hirsuto, minor, capitulo rotundo brevi. *Dill. in Raii Syn.* 316.

COMMON on dry sandy or gravelly ground, and by the sea side in many places, flowering all summer long.

Root annual, tapering. Leaves radical, numerous, spreading in a star-like form and generally pressed close to the ground, whence one of the old names of this species, Star of the Earth; they are divided in a pinnatifid manner into numerous deep linear segments, frequently toothed and subdivided, pointed, more or less hairy. Stalks several, simple, round, hairy, spreading from the base, then ascending, the central one only being quite erect. Spike about an inch long, dense, greenish. Corolla white. Antheræ terminated by a membrane.

Few plants vary more in size. On dry exposed heaths the little hoary leaves seem almost pressed into the earth, and the spikes are so short as to become capitate. In the maritime variety β the leaves are almost entire.

We should be tempted to adopt (with Mr. Relhan) the name *coronopifolia* for this species instead of the substantive *Coronopus*, as another *Coronopus* now stands as a genus in the *Fl. Brit. p.* 690; but this being the identical plant so named by the oldest writers, such an innovation is perhaps better avoided.

Radiola millegrana.

RADIOLA millegrana.

All-seed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* in many segments. *Petals* 4. *Capsule* superior, with 8 valves and 8 cells. *Seeds* solitary.

SPEC. CHAR. ....

SYN. Radiola millegrana. *Sm. Fl. Brit.* 202.

R. vulgaris serpyllifolia. *Dill. in Raii Syn.* 345. *t.* 15. *f.* 3.

Linum Radiola. *Linn. Sp. Pl.* 402. *Huds.* 134. *With.* 323. *Hull* 67. *Lightf.* 174. *Dicks. H. Sicc. fasc.* 10. 7.

IN sandy plashy spots, such as the Toad Rush generally inhabits, the little annual represented on the annexed plate may often be found; yet it should seem to be far from a general plant, not being mentioned in any of our three principal local Floras, though noticed by Mr. Jacob in his *Plantæ Favershamienses*, and by Mr. Teesdale among the rarer Yorkshire plants, *Tr. of L. Soc. v.* 2. 107. It flowers in July and August, soon evincing the propriety of its old names *Millegrana* and All-seed, by the multitude of little capsules, each containing 8 seeds, with which it is laden.

The root is small and fibrous. Stem an inch or two high, repeatedly forked, and forming altogether a kind of *corymbus*. Leaves opposite, sessile, small, ovate, entire, smooth. Flowers springing solitarily from the forks of the stem on little stalks, the upper ones only being terminal. Calyx 4-cleft, its lobes deeply 3-cleft. Petals white, obovate. Stamina about equal to the corolla. Styles short, with capitate stigmas, permanent, each combining 2 of the valves of the capsule. Seeds solitary, compressed, polished.

The remarkable structure of the calyx, and the habit of the plant, not to mention differences of number, surely justify the separation of this genus from *Linum*, in which we follow Dillenius and the present Professor Gmelin.

Viola hirta

VIOLA hirta.

Hairy Violet.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-leaved, lengthened out at the base. *Pet.* 5, irregular; the lowermost spurred behind. *Antheræ* slightly cohering. *Caps.* superior, of 1 cell, with 3 valves.

SPEC. CHAR. Stem none. Leaves heart-shaped, rough, as well as their footstalks, with hairs. Calyx obtuse.

SYN. Viola hirta. *Linn. Sp. Pl.* 1324. *Sm. Fl. Brit.* 244. *Huds.* 379. *With.* 260. *Hull* 191. *Relh.* 329. *Sibth.* 83. *Abbot* 190. *Curt. Lond. fasc.* 1. *t.* 64.

V. martia major, hirsuta, inodora. *Raii Syn.* 365.

THE Hairy Violet, which to a careless observer differs from the common sweet one chiefly in having rather paler and scentless flowers, is notwithstanding a most distinct species from that, and by far less frequent. It is only found on a chalk or lime-stone soil, flowering in April or May. Our specimen grew at Charlton in Kent.

Root perennial, somewhat woody. Stem none. Scyons short, simple, prostrate, but not taking root. Leaves on long upright hairy footstalks, heart-shaped, serrated, veiny, clothed on both sides with short dense hoary hairs. Stipulæ in pairs, radical, lanceolate, toothed. Flower-stalks taller than the leaves, smooth, bearing *below* their middle (as Mr. Curtis first observed) a pair of lanceolate smooth bracteæ. Calyx smooth. Lateral petals marked with a hairy line, as in *V. odorata.* Stamina flat. Antheræ terminating in an orange-coloured membrane, approaching each other, but not united. Capsule roundish, hairy, containing several round seeds.

Illecebrum verticillatum.

ILLECEBRUM verticillatum.

Whorled Knotgrass.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* of 5 leaves, cartilaginous, inferior. *Cor.* none. *Capsule* of 5 valves with 1 cell. *Seed* 1.

SPEC. CHAR. Flowers whorled, without bracteæ. Stems procumbent.

SYN. Illecebrum verticillatum. *Linn. Sp. Pl.* 298. *Sm. Fl. Brit.* 268. *Huds.* 100. *With.* 267. *Hull.* 54. *Dicks. Dr. Pl.* 57. *H. Sicc. fasc.* 12. 13. Corrigiola. *Raii Syn.* 160.

No part of Britain except Cornwall and Devonshire has been hitherto known to produce this plant. It grows in moist boggy places, flowering in July, and was gathered by Mr. D. Turner and Mr. Sowerby in their western excursion two years since.

Root creeping and perennial. Herb smooth. Stems procumbent, a little branched, clothed with numerous pairs of opposite, nearly sessile, ovate, entire, rather fleshy leaves, which are accompanied above their insertion by membranous lacerated stipulæ. Tufts of flowers forming a small whorl grow out of the *axillæ* of almost every pair of leaves. The calyx consists of 5 white oblong leaves, thick and fleshy hollowed out on the inside, and each tipped with a curved bristle. The stamina are shorter than the calyx, and stand on a kind of ring, with 5 reddish awl-shaped rays, ranged alternately with them on the same basis, which look like petals; but their insertion, and the analogy of other plants in this Natural Order, rather indicate them to be of the nature of barren filaments. We know not whether they are found in every species of *Illecebrum*. The germen is ovate, style very short, stigma red, with 5 small notches. Capsule of one cell, but formed of 5 valves, the most certain mark of the genus. Seed solitary, elliptical, tapering, round, not compressed.

376.

Gentiana nivalis.

July 1. 1801 Published by Jas. Sowerby, London.

GENTIANA nivalis.

Small Alpine Gentian.

PENTANDRIA Digynia.

GEN. CHAR. *Cor.* of 1 petal, tubular at the base, destitute of honey-bearing pores *Caps.* superior, one-celled, two-valved, with 2 longitudinal receptacles. *Seeds* many.

SPEC. CHAR. Corolla five-cleft, funnel-shaped. Angles of the calyx even, acute. Stem many-flowered.

SYN. Gentiana nivalis. *Linn. Sp. Pl. 322. Dicks. Tr. of Linn. Soc. v. 2. 290. Sm. Fl. Brit. 286. With. 280. Hull. 55. Fl. Dan. t. 17.*

TRULY does this hardy little plant deserve the name of *nivalis*, for on the Alps it is only to be found about the limits of perpetual frost, and in our own country it has been observed no where but on the summits of one or two of the highest mountains of Scotland, which are seldom three months in the year without snow. It is annual, flowers in July or August, and quickly ripens its seed. We are obliged to Mr. G. Don for wild specimens.

The root is slender, tapering, and branching into a few fibres. Stem 2 or 3 inches high, erect, more or less branched, square, leafy, bearing from 2 to 6 or 7 flowers; our British specimens are generally less luxuriant than those of Switzerland. Leaves elliptical, entire, the lower ones most acute. Flowers solitary at the end of each branch, erect, slender; their tube green, the limb of a beautiful ultramarine colour, in 5 larger lobes with small cloven segments between them. The calyx is tubular, with 5 sharp, plain, (not waved,) equal angles, and as many teeth. Stamina 5, inclosed within the tube of the corolla. Styles united at their base.—The whole herb is smooth, as we believe is the case with every Gentian.

Sibbaldia procumbens.

SIBBALDIA procumbens.

Procumbent Sibbaldia.

PENTANDRIA Pentagynia.

GEN. CHAR. *Cal.* in 10 segments. *Petals* 5, standing on the calyx. *Styles* from the side of the germen. *Seeds* 5, in the bottom of the calyx.

SPEC. CHAR. Leaflets wedgeshaped, three-toothed.

SYN. Sibbaldia procumbens. *Linn. Sp. Pl.* 406. *Sm. Fl. Brit.* 345. *Huds.* 136. *With.* 326. *Hull* 68. *Lightf.* 175. *Dicks. H. Sicc. fasc.* 10. 12.

Pentaphylloides pumila, foliis ternis ad extremitates trifidis. *Raii Syn.* 256.

THE summits of the highland mountains abound with the *Sibbaldia procumbens*, which thrives there in a mouldering micaceous soil full as luxuriantly as in any garden, and may be found in flower throughout July. We have gathered it on Ben Lomond. The present specimen was sent by Mr. Mackay.

Roots woody, tufted and perennial. Stems short, spreading and procumbent, except sometimes at their flowering extremities, leafy, round, downy. Leaves on long footstalks with a pair of oblong acute stipulæ, like those of a rose, united to their base; leaflets three, on short partial stalks, wedgeshaped, terminating in 3 large teeth, but otherwise entire, a little hairy. Flowers in a sort of small leafy corymbus, minute and inconspicuous, with a hairy calyx cut into 10 lobes alternately larger and smaller, and bearing 5 little oblong yellow petals and as many stamina, placed on a thickened rim, as is proper to the rosaceous order to which this genus belongs. Germen of 5, rarely 10, little round embryos, each bearing a small lateral style. The seeds are dry, small and roundish.

Sir Robert Sibbald first described and figured this plant in his *Scotia Illustrata* published in 1684, and it therefore deservedly bears his name.

898
312.

Juncus biglumis

JUNCUS biglumis.

Two-flowered Rush.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Leaves flat. Head terminal, of two flowers, leaning to one side, leafy at the base.

SYN. Juncus biglumis. *Linn. Sp. Pl.* 467. *Sm. Fl. Brit.* 382. *Huds.* 649. *With.* 348. *Hull.* 76. *Lightf.* 1100. *Fl. Dan. t.* 120.

MR. G. DON, who favoured us with this rare plant, assures us it is seldom found on any other hill than Ben Lawers in Bredalbane; the Rev. Mr. Stuart however, its first discoverer in Britain, mentions two or three highland mountains as producing it. We are persuaded there are few British plants less known, nor any species more certainly distinct, though Mr. Lightfoot suspected it might be a variety of *J. triglumis* (see the next plate), and several botanists have since confounded them together. The learned Dr. Montin, a distinguished pupil of Linnæus, originally found the *J. biglumis* in Lapland, and described it in a note to his treatise on *Splachnum*, published in the *Amœnitates Academicæ*.

J. biglumis is perennial, and flowers in August. The little fibrous roots run deep into the boggy soil of small mountain rills. The stem is from 2 to 4 inches high, leafy, simple, round. Leaves awl-shaped, flat, erect, sheathing at their base. Flowers terminal, one above the other, and both leaning to one side, having a small bractea below them, and a longer upright leafy one surmounting the uppermost flower. Calyx-leaves lanceolate, equal, keeled, variegated with green and a dark chocolate hue. Stamina a little longer than the calyx, as is also the capsule when ripe, though the germen is not above half so long.

One flower being placed above the other decidedly marks this species.

Juncus triglumis.

July 1 1801. Published by Jas Sowerby, London.

JUNCUS triglumis.

Three-flowered Rush.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Leaves flat. Head terminal, erect, of three flowers, accompanied by bracteæ without leaves.

SYN. Juncus triglumis. *Linn. Sp. Pl.* 467. *Sm. Fl. Brit.* 382. *Huds.* 151. *With.* 349. *Hull.* 76. *Lightf.* 186. *t.* 9. *f.* 2. *Fl. Dan. t.* 132. *Dicks. H. Sicc. fasc.* 2. 3.

Juncello accedens graminifolia planta, capitulis Armeriæ proliferæ. *Raii Syn.* 430.

JUNCUS *triglumis* is much more common and plentiful than the preceding about the little rills and boggy places on the tops of most Scottish and Welsh mountains. Mr. Robson has even found it in Cumberland. It flowers in July, and is perennial.

This has very much the herbage and general habit of the Two-flowered Rush; but though extremely variable in luxuriance, it generally considerably exceeds that species in magnitude. The number of flowers in the head, though naturally three, often varies from only one or two, to four or five. In every case, however, the plant is to be known by bearing the flowers erect and parallel to each other, not leaning to one side, nor one overtopping the other. They are moreover accompanied by membranous bracteæ, shorter than the flowers themselves, instead of a large erect leafy involucrum. The glumes and bracteæ are also of a somewhat paler and redder brown than those of the last.

Dillenius could surely never have seen this Rush when, in his edition of Ray's *Synopsis*, he supposed it the same with *Scirpus cæspitosus*; nor was Mr. Hudson's conjecture more happy, when, in his 1st edition, he took the plant of Ray for the *Schœnus ferrugineus* of Linnæus.

Juncus caninus.

JUNCUS castaneus.

Clustered Alpine Rush.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Leaves folded, flat, clasping the stem. Heads terminal, mostly in pairs, many-flowered, with a leaf under them. Bracteæ acute.

SYN. Juncus castaneus. *Sm. Fl. Brit.* 385.
J. Jacquini. *Sym. Syn.* 87. *Hull.* 76.

WE know not that any figure exists of this Rush. It was first found on the highland mountain of Ben Lawers, by Mr. Dickson and Mr. Mackay, and appeared on the list of British plants in Mr. Symons's *Synopsis*, under the name of the Linnæan *Juncus Jacquini*, which at first sight it resembles, but from which it will be found on comparison widely different.

The plant now before us grows in marshy places where the soil is micaceous, flowering in July. The root is perennial, creeping by means of long slender scaly scyons, which throw up young plants from their extremities. Stems from 6 to 12 inches high, round, solitary, leafy, not clustered and naked as in *J. Jacquini*. Leaves all growing on the stem, most numerous about the bottom, alternate, erect, sheathing and broad at their base, folded above so as to make a sharp keel, with 2 flat sides: the uppermost immediately under the flowers, short and small. Heads terminal, erect, two together, except in weak plants, one on a longer stalk than the other, of a dark shining brown, and formed of about 4 or more flowers with a lanceolate pointed bractea to each, a little remote from the base. Calyx-leaves acute, the length of the stamina, but only half as long as the ripe capsule, which is oblong, pointed, 3-celled, containing numerous seeds. The seeds terminate in a slender appendage at each end, as in *Narthecium ossifragum, t. 535.*

Sisymbrium thalianum.

ARABIS thaliana.

Common Wall-Cress.

TETRADYNAMIA Siliquosa.

GEN. CHAR. *Nectariferous glands* 4, oblong, scale-like, reflexed. *Cal.* closed; two of its leaves gibbous at the base. *Stigma* simple. *Pod* linear, rugose.

SPEC. CHAR. Leaves hairy, more or less toothed; the radical ones on footstalks. Stem branched. Pods pointing upwards.

SYN. Arabis thaliana. *Linn. Sp. Pl.* 929. *Sm. Fl. Brit.* 712. *Huds.* 292. *With.* 587. *Hull.* 147. *Relh.* 254. *Sibth.* 205. *Abbot.* 145. *Curt. Lond. fasc.* 2. *t.* 49. *Dicks. H. Sicc. fasc.* 17. 12.
Turritis vulgaris ramosa. *Raii Syn.* 294.

COMMON on walls, roofs and dry gravelly places, flowering in April.

Root annual, tapering, fibrous. Stem solitary, upright, from 2 to 10 inches high, branched, leafy, round, hairy about the base. Leaves lanceolate, hairy, unequally toothed or serrated, sometimes entire, especially when the plant is starved and diminutive; the radical ones lying close to the ground; the rest alternate, and smaller. Flowers corymbose, on slender stalks, small, white. Calyx bristly upwards. Petals erect. Nectariferous glands minute, like little curved scales at the base of the stamina, but not projecting between the calyx-leaves, nor do they seem to us constant or conspicuous enough in this or any other *Arabis* to make a generic character. The pods stand nearly erect on spreading stalks, and are linear, a little rugged, but destitute of hairiness.

The whole plant partakes of the pungent flavour of its class, but is not remarkable for any peculiar quality. After scattering its seeds in May it soon withers and disappears.

902
963.

Erodium moschatum

ERODIUM moschatum.

Musky Stork's-bill.

MONADELPHIA Pentandria.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5. *Honey-glands* 5. *Barren filaments* 5. *Fruit* beaked, separating into 5 capsules, each tipped with a long spiral awn, bearded on the inside.

SPEC. CHAR. Flower-stalks many-flowered. Leaves pinnate; leaflets nearly sessile, elliptical, unequally cut.

SYN. Erodium moschatum. *L'Herit. in Ait. H. Kew. v. 2. 414. Sm. Fl. Brit. 728.*

Geranium moschatum. *Linn. Sp. Pl.* 951. *Huds.* 300. *With.* 609. *Hull.* 153. *Raii Syn.* 358.

A RECENT discovery of the Rev. Mr. Abbot's on Ampthill warren, Bedfordshire, who favoured us with this truly wild specimen in April, 1801. The plant sometimes occurs in elevated pastures, most frequently in Yorkshire and Westmoreland, flowering throughout the summer.

Root branched, tapering, somewhat fleshy, annual. Stems spreading close to the ground, leafy, round, hairy. Leaves alternate, composed of many pairs of almost sessile, elliptical, broad, hairy leaflets, unequally serrated or cut at their edges, with an odd terminal one, often united to the next pair. Stipulæ membranous. Flower-stalks radical or axillary, curved and spreading, bearing an umbel of several pretty rose-coloured flowers, with a round toothed general involucrum. Calyx tipped with red glands. Fertile stamina toothed on each side at their base; the barren ones broad and entire.

The whole herb is hairy and viscid, diffusing a strong musky fragrance, for which it is sometimes kept in gardens, and by which it is known from the common *E. cicutarium*, as well as by its broader and less divided leaflets.

Trifolium scabrum.

TRIFOLIUM scabrum.

Rough Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads sessile, lateral, ovate. Calyx-teeth unequal, permanent, rigid, at length recurved.

SYN. Trifolium scabrum. *Linn. Sp. Pl.* 1084. *Sm. Fl. Brit.* 788. *Huds.* 327. *With.* 648. *Hull.* 163. *Relh.* 282. *Sibth.* 229. *Abbot.* 162. *Curt. Lond. fasc.* 6. *t.* 48.

T. flosculis albis, in glomerulis oblongis asperis, cauliculis proximè adnatis. *Raii Syn.* 329.

THIS species of Trefoil, more curious to the botanist than interesting to the farmer, is only occasionally found on chalky ground, or in dry sandy fields that lie over a calcareous soil, where it flowers in May or June, and then soon dries up and is blown about, scattering its seeds against the autumnal rains, when they produce young plants which blossom the following spring. Our specimens came from Kent. It is found also in Norfolk. Mr. Crowe gathered it on Snettisham beach, and in an old chalk-pit near Wells.

The root is small and annual. Stems several, prostrate, rigid, often a little zigzag, round, hairy. Leaflets obovate or obcordate, toothed, veiny, hairy. Stipulæ lanceolate. Heads axillary and terminal, solitary, sessile, ovate, hairy, composed of many thick-set, white, or pale blush-coloured, flowers. Calyx hairy, with a pale furrowed base, and green sharp lanceolate teeth, erect at first, but soon spreading, and at length recurved, hard and rigid. Pod membranous, whitish, enclosed in the calyx. Seed yellowish.

Carex filiformis.

CAREX filiformis.
Slender-leaved Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none.

Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Spikes ovate; males generally two. Sheaths nearly as long as the flower-stalks. Scales pointed. Fruit downy. Leaves channelled, smooth.

SYN. Carex filiformis. *Linn. Sp. Pl.* 1385. *Gooden. Tr. of Linn. Soc. v.* 2. 172. *t.* 20. *f.* 5. *Sm. Fl. Brit.* 1008. *With.* 97. *Hull.* 207.

C. tomentosa: *Lightf.* 553. *Huds.* 650.

C. hirta. *Fl. Dan. t.* 379, except the separate spike.

THE late Dr. Hope having received specimens of this *Carex* from some meadows near Ayr, made it known to Mr. Lightfoot, who took it for the *tomentosa* of Linnæus. (See *Tr. of L. Soc.*) It has since been gathered by Mr. Mackay in several other parts of Scotland. The Rev. Mr. Williams has found it in Shropshire, and we can now boast it as a Norfolk plant, on the authority of the Rev. Mr. Forby, who discovered it wild near Stoke.

The root is creeping and perennial. The flowers are out in June. The stem rises erect to the height of 2 feet, straight, slender, round, smooth and rushy, except towards the top, where it often assumes three rough angles. Leaves upright, straight, narrow, channelled, but without any sharp keel, pointed, rough at the edge only. The bracteæ are like them, with short sheaths surmounted by small auricles. Male spikes generally 2, and female about as many. Glumes blackish, with yellow or greenish ribs. Stigmas 3. Fruit ovate, with a short bifid beak, ribbed, blackish, clothed with short tawny down.

Phascum curvicollum

Sept. 1 1801. Published by Sir Smeaton, London.

PHASCUM curvicollum.

Crooked-stalked Earth-Moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

SPEC. CHAR. Stem none. Leaves lanceolate, bearded, spreading. Capsule elliptical, terminal, on a recurved stalk.

SYN. Phascum curvicollum. *Hedw. Crypt. v.* 1. 31. *t.* 11. *Dicks. Crypt. fasc.* 2. 1. *H. Sicc. fasc.* 4. 20. *With.* 786. *Hull.* 252. *Schrad. Spicil.* 58.

FOUND on dry grassy spots near Croydon by Mr. Dickson, to whom we are obliged for this specimen.

It grows in patches. The root is formed of numerous fibres. Leaves all radical, lanceolate, entire, furnished with a red prominent midrib, which terminates in a taper beard or *arista*. From the centre of the leaves springs a solitary naked stalk, about their own length, brownish, soon becoming recurved, so as to bury in the earth the fruit it bears, which is a small brown capsule, exactly elliptical, terminated by a short slightly oblique point. The veil is short and conical, soon falling off.

The ripe capsule is to be found about May.

Having in our 5th volume unluckily mistaken another plant for this, which with regard to such minute objects it is hoped may be pardoned, we would wish to change the synonyms and characters given at *t.* 330, for the following.

PHASCUM rectum.

Long-stalked Earth-Moss.

SPEC. CHAR. Stem none. Leaves ovate, beardless, spreading. Capsule ovate, tapering at each end, terminal, on a straightish stalk.

SYN. Phascum rectum. *With.* 787. *t.* 18. *f.* 1. *Hull.* 252.

WE have received this from Newmarket and Denbighshire. It differs from *P. curvicollum* in having beardless, though pointed, leaves, a longer and nearly upright stalk, and longer-pointed capsule.

Lecanora ventosa

LICHEN ventosus.

Red-spangled Tartareous Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust rugged, formed of tumid warts, of a pale sulphur-colour. Shields irregular, a little swelling, blood-red, with a narrow pale border.

SYN. Lichen ventosus. *Linn. Sp. Pl.* 1607. *Achar. Prod.* 46. *Huds.* 527. *With. v.* 4. 16. *Hull.* 288. *Lightf.* 806. *Dicks. H. Sicc. fasc.* 5. 23.
L. cruentus. *Web. Goett.* 184. *t.* 1.
L. gelidus. *Huds.* 528.
Lichenoides tartareum lividum, scutellis rufis, margine exili. *Dill. Musc.* 133. *t.* 18. *f.* 14.

WE have received this elegant Lichen from Durham by favour of the Rev. Mr. Harriman, and have ourselves gathered it in great perfection on Ben Lomond; on Casterton Fell, near Kirkby Lonsdale, Westmoreland; and in some other places. It grows on large exposed stones of the granite kind.

The crust spreads in patches 6 or 8 inches broad, and may in moist weather be pared off entire from the rock. It is moderately thick, apparently a congeries of crowded swelling smooth (not mealy) warts, of a pale yellowish green or sulphur-colour, which however changes to a tolerably pure white in the course of one winter's growth, for the plant appears to last several years. The shields are numerous, scattered, of a beautiful crimson or blood-red, irregular in size and shape, a little tumid, and encompassed by a margin of the colour of the crust, becoming narrower and stained with red by age. Little black rugged warts are also scattered over the surface of the crust, or in its cracks; we can only guess them to be the male part of the fructification. The old shields turn black in decay, and often bear young ones.

That this when white is the *L. gelidus* of Mr. Hudson, I ventured many years ago to presume from his description, and the synonym (though wrong transcribed in the *Fl. Angl.*) of Dillenius. For the true *gelidus* see our *v.* 10. *t.* 699.

2296.

Pycnothelia Papillaria

Augt 1 1801 Published by Jas Sowerby London

LICHEN Papillaria.

Papillary Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Cartilaginous; leaflets minute, rounded, imbricated. Stems mostly simple, erect, short, tubular, inflated, whitish. Tubercles terminal, solitary, globose, brown.

SYN. Lichen Papillaria. *Achar. Prod.* 88. *Dicks. Crypt. fasc.* 1. 13. *With. v.* 4. 45. *Hull.* 305.

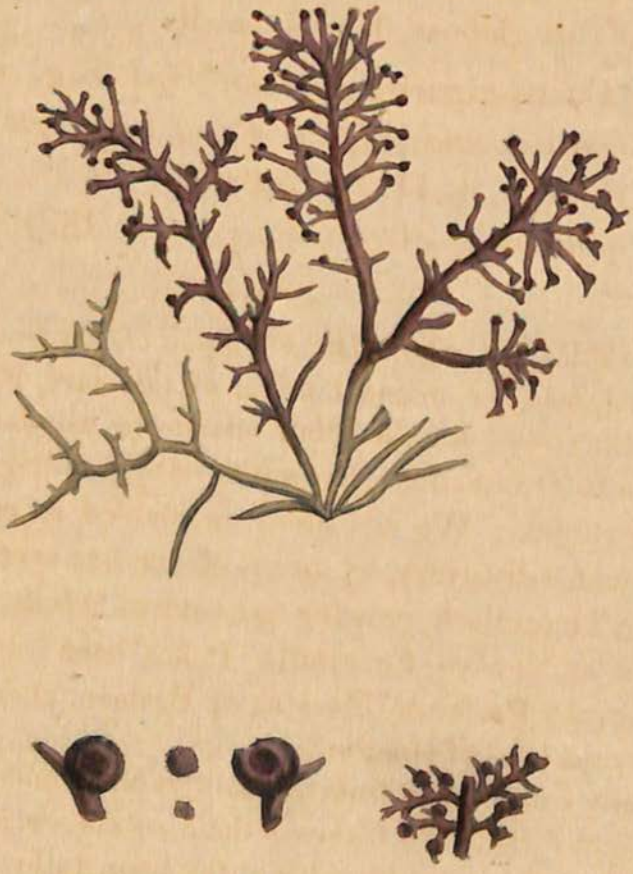
L. madreporæformis. *Wulf. in Jacq. Coll. v.* 3. 105. *t.* 3. *f.* 2.

Coralloides minimum fragile, Madreporæ instar nascens. *Dill. Musc.* 107. *t.* 16. *f.* 28.

FOUND on dry exposed heaths in the winter season. Dillenius mentions it as growing near Farnham. Mr. D. Turner sent it from Yarmouth, and we have gathered it on Mousehold heath, Norwich, towards Rackheath.

Surely Mr. Dickson and others, who have placed this Lichen in the Linnæan division of *fruticulosi*, have come nearer the truth than Dr. Acharius, who has removed it to the same tribe with *L. corallinus*. We venture in this instance therefore to dissent from his opinion, and to refer the plant in question to his 23d tribe, *Cladonia*, consisting of *L. uncialis*, *rangiferinus*, and others, whose basis is formed of imbricated leaves, which bear tubular stalks, fructifying at the summit. The crust of *L. Papillaria* is decidedly such, though minute. The stalks or stems stand more or less closely, upright, and are very short, generally simple, hollow and inflated. Dillenius and Wulfen represent a more slender and branched variety, which more nearly approaches the other *Cladoniæ*. Round brown solitary little tubercles terminate each stem.

We can by no means consider Weber's *L. fragilis* α as having any thing to do with the above, but rather presume he intended our *fragilis t.* 114. *f.* 1, and has misquoted Dillenius and Haller.



Gigartina pistillata?

Aug.t 1, 1801. Published by Jas. Sowerby, London.

FUCUS gigartinus.
Grape-seed Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, forked, branched; branches linear, pointed, set with spinous teeth. Fruit globose, lateral, sessile.

SYN. Fucus gigartinus. *Linn. Syst. Veg. ed.* 13. 816. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 183. *With. v.* 4. 111. *Hull.* 323.

F. pistillatus. *Gmel. Fuci* 159. *t.* 18. *f.* 1.

THE late excellent Dr. Wenman of All Souls College, Oxford, was the original finder of this rare Fucus on the Cornish coast; for the other specimens alluded to in the Linnæan Transactions were gathered by Loefling at St. Ubes in Portugal. We are however enabled to confirm Dr. Wenman's discovery, by means of one fine specimen found by Dr. Maccullock, growing on a bank of *Sabella*, in Mounts-bay, near Newlyn, Cornwall. It has been sent to Mr. D. Turner by Professor Mertens of Bremen, under the name of *F. pistillatus* of Gmelin.

Many fronds grow from one callous base, and are various in height from 2 to 5 inches; their substance is rigid and horny; their colour blackish at the base, dull-red upwards, paler and often greenish at the summits. Each frond is linear, flattish, forked, and variously branched, ending in taper points, and furnished in the upper part chiefly with spinous teeth, the rudiments of branches. The fructification is striking and characteristic, consisting of dark-red sessile lateral globules, containing a cluster of seeds, which at length come forth at a terminal orifice.

Triticum repens.

TRITICUM repens.

Creeping Wheat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, solitary, many-flowered, upon a zigzag toothed *rachis*.

SPEC. CHAR. Calyx awl-shaped, many-nerved, five-flowered. Florets sharp-pointed. Leaves flat. Root creeping.

SYN. Triticum repens. *Linn. Sp. Pl.* 128. *Sm. Fl. Brit.* 158. *Huds.* 57. *With.* 173. *Hull.* 28. *Relh.* 55. *Sibth.* 52. *Abbot.* 27. *Mart. Fl. Rust. t.* 124.

Gramen spicâ triticeâ repens vulgare, caninum dictum. *Raii Syn.* 390.

THIS very troublesome and pernicious weed is but too well known to gardeners by the name of Couch, Quick, or Dog-grass. It thrives in all kinds of cultivated ground, flowering from June to September, and insinuating its long creeping perennial roots so deeply into the earth as to be with great difficulty extirpated; for a very small piece of the root left behind, soon sprouts forth into a fresh crop. The fibres moreover are downy, which seems a provision of Nature for the peculiar benefit of such grasses as are favoured with it, being found in most that occupy very dry or barren situations.

The stems are slender, upright, 2 feet high. Leaves linear, flat, spreading, often all directed to one side, which gives the grass a picturesque and Indian-like aspect. Sheaths tight, ribbed, smooth, crowned with a short stipula. The spike or ear is 2 or 3 inches long, flat, composed of numerous spikelets, all whose glumes are sharp-pointed, and often more or less bearded. Sometimes the common zigzag stalk is hairy.—A glaucous variety, common on the coast, is often mistaken for *T. junceum*, see our *t.* 814, and was the *Elymus arenarius* of Mr. Hudson's 1st edition.

Oxyria reniformis.

RUMEX digynus.
Mountain Sorrel.

HEXANDRIA Trigynia.

GEN. CHAR. *Cal.* 3-leaved. *Petals* 3, closed. *Seed* 1, superior, naked, triangular. *Stigmas* many-cleft.

SPEC. CHAR. Valves ovate, entire, without grains. Styles two.

SYN. Rumex digynus. *Linn. Sp. Pl.* 480. *Sm. Fl. Brit.* 395. *Huds.* 156. *With.* 357. *Hull.* 78. *Lightf.* 190.

Acetosa rotundifolia repens Eboracensis, folio in medio deliquium patiente. *Raii Syn.* 143.

MR. MACKAY has kindly supplied us with this specimen of the Mountain Sorrel, a plant which inhabits moist clefts of rocks and boggy spots about the summits of high mountains in Scotland, Wales, and the northern counties of England, flowering in June.

The root is perennial, deeply fixed in the ground, branching at the top into many heads. Stems 6 or 8 inches high, nearly naked, panicled. Leaves almost entirely radical, on long footstalks, kidney-shaped, cut off as it were at the end, entire, smooth, veiny, of a light pleasant green. Each branch of the stem has a sheathing membranous bractea at its base. The flowers are ranged along the branches in little pendulous tufts. Segments of the calyx unequal, ovate, entire and undivided, destitute of any granulations. Stamina short. Germen obcordate, compressed, with 2 red-edged wings. Styles but 2, short, with red tufted stigmas. The whole herb has an acid flavour mixed with astringency.

Linnæus in *Critica Botanica p.* 220 justly diverts himself at the expense of Morison, who describes the leaf of this *Rumex* as "fainting away in the middle;" see Ray's synonym. He at first conceived Morison intended the garden sorrel with a pale spot on the leaf, as persons who faint always turn pale, but afterwards found his mistake.

911.
637.

Stellaria cerastoides.

STELLARIA cerastoides.

Alpine Stitchwort.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* 5-leaved, spreading. *Petals* 5, deeply cloven. *Caps.* superior, of 1 cell, with 6 teeth at the orifice. *Seeds* numerous.

SPEC. CHAR. Leaves elliptic-oblong, bluntish. Stems generally two-flowered, marked with a hairy longitudinal line. Calyx-leaves with a single nerve, downy.

SYN. Stellaria cerastoides. *Linn. Sp. Pl.* 604. *Sm. Fl. Brit.* 477. *Pl. Ic. t.* 15. *Dicks. Tr. of Linn. Soc. v.* 2. 290. *H. Sicc. fasc.* 2. 11. *With.* 421. *Hull.* 97. *Fl. Dan. t.* 92.

AN uncoloured plate of this plant was given in the first fasciculus of my *Plantarum Icones* in 1789, because I had then no idea of its being any where figured, and few botanists appeared to know it. Linnæus himself after publishing an excellent description in *Fl. Suec. n.* 394, confounded many other things with it. Mr. Dickson first made it known as a British native. Our wild specimens were gathered on Ben Nevis, and mountains to the north of Invercauld, by Mr. J. Mackay.

The root is perennial and creeping, and the flowers come out in June. Stems diffuse, branched at the bottom, leafy, marked with a slender alternate hairy line (first detected by Mr. Sowerby) as in the Common Chickweed *t.* 537, which confirms the generic affinity of the two plants. The flower-stalks however, which grow about 2 together at the extremity of the stem, are downy in every part. Leaves opposite, lanceolate or somewhat spatulate, blunt, entire, smooth, often leaning to one side. Flowers erect, white. Calyx-leaves obtuse, single-ribbed, downy and viscid at the base, membranous in the margin. Petals about twice as long as the calyx, cloven half-way down, narrow. Styles sometimes 4 or 5; teeth of the capsule double their number. Seeds rough, pale brown.

912.

918.

Draba muralis

Engd from a Sketch by J. Sowerby London

DRABA muralis.

Speedwell-leaved Whitlow-grass.

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* entire, long-oval: valves flattish, parallel to the partition. *Style* scarcely any.

SPEC. CHAR. Stem branched. Leaves heart-shaped, toothed, hairy. Pouch elliptical, obtuse, flat.

SYN. Draba muralis. *Linn. Sp. Pl.* 897. *Sm. Fl. Brit.* 679. *Huds.* 278. *With.* 566. *Hull.* 143.

Bursa pastoris major, loculo oblongo. *Raii Syn.* 292.

GATHERED by the Rev. Mr. Abbot, in flower April 14 last, on the Wardon Hills, near Barton in the clay, Bedfordshire, and the second rare north-country plant which has rewarded that gentleman's perseverance and acuteness this spring in his own neighbourhood, see *t.* 902. This *Draba* has scarcely before been found truly wild out of Yorkshire, though naturalized on walls about Chelsea garden. It loves a dry calcareous soil, and rather shady situation.

The root is annual, small, fibrous, or somewhat spindle-shaped. Stem a span high, branched from the bottom, leafy, round, clothed with depressed forked and stellate hairs. Leaves alternate, heart-shaped; the uppermost clasping the stem; the lowest on short footstalks; all toothed, rough with simple and forked hairs intermixed. Flowers in a terminal *corymbus*, lengthened out as the fruit is fully formed into a very long *racemus*, small, white, numerous. Petals undivided, obovate. Pouch flat, not twisted, elliptical, bluntish, smooth, standing on the spreading horizontal hairy flowerstalk, about twice its own length. Style very short, crowning the pouch.

913.
1139

Gnaphalium sylvaticum.

Published by J. Sowerby, London

GNAPHALIUM sylvaticum.
Highland Cudweed.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem simple, erect. Flowers spiked. Leaves lanceolate, tapering at the base, woolly on both sides.

SYN. Gnaphalium sylvaticum. *Linn. Sp. Pl.* 1200. *Sm. Fl. Brit.* 870. *Lightf.* 472, variety. *With.* 713. *Hull.* 183.

G. norvegicum. *Retz. Prod.* 193.

SOME account of this species of *Gnaphalium* will be found in our 2d volume, *p.* 124, where our *G. rectum*, which has generally been confounded with it, is figured. The two plants are indeed nearly akin, but we still think them distinct.

That now under consideration grows on several highland mountains, and has been sent us wild by Mr. G. Don, and Mr. J. Mackay; the latter informs us it is not found in woods, though Linnæus expressly asserts the contrary, and we have no reason to think, from his definition in the *Fl. Lapp.* or from his herbarium, that he gathered both species in Lapland, though he confounded their synonyms. If he did, he is responsible both for his own error and the badness of the specific name.

The root is black, perennial, furnished with many simple fibres. Stem from 4 to 6 inches high, leafy, woolly. Leaves alternate, lanceolate, entire, acute, narrow and elongated at their base, clothed on both sides with white cottony down. Spike terminal, leafy, dense, almost perfectly simple, except when very luxuriant. Flowers much like those of *G. rectum*, except that the calyx-scales are more compact, and much blacker towards their extremities.

1268.

Carex stricta

CAREX stricta.

Glaucous straight-leaved Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Stigmas two. Bracteæ not sheathing, slightly auricled. Spikes nearly sessile, cylindrical, elongated, acute. Fruit deciduous.

SYN. Carex stricta. *Gooden. Tr. of Linn. Soc. v. 2. 196. t. 21. f. 9. Sm. Fl. Brit. 1000. With. 107. Hull. 208.*

C. cæspitosa. *Huds. 412. Lightf. 561, β.*

Gramen cyperoides foliis caryophylleis, spicis erectis sessilibus, e seminibus confertis compositis. *Raii Syn. 418.*

THIS *Carex*, though known to Ray, has not been generally distinguished by modern botanists from the *cæspitosa*, till Dr. Goodenough clearly discriminated them in his excellent paper. They agree in having only 2 stigmas, no sheaths to their bracteæ, and spikes nearly sessile; but the *stricta* is twice as large as the *cæspitosa*, its leaves more glaucous (or pink-like, as Ray expresses it), capsules deciduous, more constantly in 8 rows, and it flowers in April, a month before the *cæspitosa*. The root is creeping. Stem about 2 feet high, sharply triangular, rough upwards. Leaves erect and straight, as are also the spikes. It often produces 2 male spikes, and should then be placed in the same section with *C. acuta*, which has also but 2 stigmas, but which is distinguished by its drooping spikes, 2 or 3 of which are male.

C. stricta grows in marshy places not unfrequently. Mr. Pitchford found it near Norwich. We have received it from Cambridge by favour of the Rev. Mr. Holme.

Augst 1 1801 Published by Jas Sowerby London.

EQUISETUM hyemale.
Rough Horse-tail.

CRYPTOGAMIA Filices.

GEN. CHAR. *Catkin* composed of peltate scales, flowering on their inside. *Partial calyx* of 2 valves. *Seeds* numerous, naked, enfolded by 4 pollen-bearing filaments.

SPEC. CHAR. Stem naked, very rough, mostly branched at the base. Sheaths whitish, black at the base and summit.

SYN. Equisetum hyemale. *Linn. Sp. Pl.* 1517. *Huds.* 448. *With.* 756. *Hull.* 234. *Lightf.* 650. *Relh.* 385. *Abbot.* 222. *Bolt. Fil.* 70. *t.* 39.

E. nudum. *Raii Syn.* 131.

GATHERED near Rippon, Yorkshire, by Mr. W. Brunton junior of that place. Although generally esteemed a very rare plant, it is found, always indeed sparingly, in boggy woods and thickets in several parts of Britain.

The roots are perennial, black, creeping. Stems erect, simple, except at the base, naked, round, jointed, hollow, furrowed, rough, each joint encircled with a membranous, short, black and white, toothed sheath or ruffle. Catkin terminal, ovate, dark-brown, splitting into many angular peltate scales, within whose clefts on the inside are lodged numerous minute germens, (afterwards becoming naked seeds,) each of which is invested by 4 spiral filaments, which bear the pollen, according to Hedwig's just remarks.

The fructification appears in summer. The stems last throughout the winter, (whence the name *hyemale*,) and have long been imported from Holland to polish cabinet-work, ivory, and even brass. Their cuticle is extremely rough and hard; the ingenious Mr. Davy, now lecturer at the Royal Institution, has found it to contain a large portion of siliceous earth.

Lonicera Xylosteum.

Aug.1 1801 Published by Jas Sowerby, London

LONICERA Xylosteum.

Upright Honeysuckle.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* of 1 petal, irregular. *Berry* inferior, with several *seeds*.

SPEC. CHAR. Stalks two-flowered. Berries distinct. Leaves entire, downy.

SYN. Lonicera Xylosteum. *Linn. Sp. Pl.* 248. *Berk. Outlin. ed.* 1. *v.* 2. 60. *With.* 247. *Sym. Syn.* 59. *Hull.* 53.

Periclymenum rectum germanicum. *Ger. em.* 1294.

BERKENHOUT, on the authority of Wallis's History of Northumberland, mentions this shrub as growing in the fissures of rocks under the Roman wall near Shewing-Sheels, a kind of situation in which it should seem to be truly wild: but its being frequent in gardens has made me consider it hitherto as a doubtful native, notwithstanding the opinion of Dr. Withering. I shall no longer dispute the point, having received the specimen here figured from Mr. W. Borrer junior, who found this plant "growing plentifully, and certainly wild, in a coppice called the Hacketts, to the east of Houghton bridge, 4 miles from Arundell, Sussex." It flowers in July.

The stem is upright, bushy, very much branched. Branches opposite, round; those of the present year downy and leafy. Leaves opposite, on footstalks, ovate, rather pointed, entire, flexible, clothed on both sides with short soft hairs, deciduous. Flowers inodorous, in pairs, on solitary axillary stalks shorter than the leaves. Outer bracteæ a pair of awl-shaped hairy spreading leaves; inner, a concave blunt hairy scale under each germen. Calyx in 5 obtuse lobes. Corolla yellowish white, often tinged with red, downy; the upper lip four-cleft, lower undivided. Stamina equal, downy, shorter than the corolla. Berries oval, red, separate, of one cell, juicy, containing 6 or more seeds.

Vinca minor.

VINCA minor.

Lesser Periwinkle.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* twisted, salver-shaped. *Pouches* 2, erect. *Seeds* without beard or wing.

SPEC. CHAR. Stems procumbent. Leaves elliptic-lanceolate, smooth at the edge. Flowers on stalks. Calyx-teeth lanceolate.

SYN. Vinca minor. *Linn. Sp. Pl.* 304. *Sm. Fl. Brit.* 270. *Huds.* 91. *With.* 268. *Hull.* 51. *Relh.* 89. *Sibth.* 79. *Abbot.* 53. *Curt. Lond. fasc.* 3. *t.* 16.

V. pervinca minor. *Raii Syn.* 268.

WE have never seen the Lesser Periwinkle (far rarer than the Greater, *t.* 514) more truly wild than about Honingham church, 6 miles west of Norwich. Our specimen was gathered near Rippon, Yorkshire, by the Rev. Mr. Dalton, and sent by Mr. W. Brunton, being in the opinion of those gentlemen perfectly wild there. It is very generally cultivated in shady places under trees, its evergreen leaves and early flowers conducing greatly to the ornament of such places. The wild plant blossoms earlier than *V. major*; and the garden varieties, one of which is double and reddish, and another white with variegated leaves, are found in bloom even in March or April.

The root is perennial and creeping. Whole plant smooth and shining. Stems round, slender, leafy; erect when in flower, afterwards prostrate, elongated, taking root at their joints. Leaves opposite, on short stalks, lanceolate inclining to elliptic, entire, of a full shining green, destitute of the fringed edge observable in *V. major*. The flowers are also smaller than in that species, of a rather darker blue, with a much shorter, smooth, and less tapering calyx. The fruit of this species we have never seen.

Actæa spicata.

ACTÆA spicata.

Herb Christopher; or Bane Berries.

POLYANDRIA Monogynia.

GEN. CHAR. *Cal.* of 4 leaves. *Pet.* 4. *Berry* superior, of 1 cell. *Seeds* numerous, flat.

SPEC. CHAR. Cluster of flowers ovate.

SYN. Actæa spicata. *Linn. Sp. Pl.* 722. *Sm. Fl. Brit.* 562. *Huds.* 228. *With.* 483. *Hull.* 115. Christophoriana. *Raii Syn.* 262.

THIS very rare plant is scarcely to be met with in Britain, except among the wild mountainous woods and thickets of the north-west part of Yorkshire. Our specimen, gathered at King Arthur's force, near Askrigg, in that county, was communicated by Mr. W. Brunton, flowering in May.

The root is creeping and perennial. Whole plant smooth, or very slightly pubescent, about a foot and half high, upright. Stem triangular, leafy, but little branched. Leaves on stalks, twice or thrice ternate, the leaflets ovate, unequally and sharply serrated and lobed. Flowers white, in a terminal, solitary, ovate, simple cluster or spike, upon the form of which, opposed to the very long many-flowered cylindrical clusters of the other species of *Actæa*, Linnæus founds his specific character. The partial flower-stalks are undivided, downy, each furnished at the base with a small ovate bractea. Calyx of 4 concave leaves, which fall off very soon after they expand. Petals spatulate. Stamina tapering, round. Antheræ approaching to the structure of those of the *Epimedium*, see our 7th vol. *t.* 438, to which we cannot help thinking this plant allied. Germen oval, with a round sessile stigma. Berries purplish-black, juicy, containing several seeds.

The berries, and indeed the whole herb, which is fœtid and nauseous, are universally allowed to be poisonous.

Scirpus sylvaticus

SCIRPUS sylvaticus.
Wood Club-rush.

TRIANDRIA Monogynia.

GEN. CHAR. *Glumes* chaffy, imbricated every way, all fertile. *Cor.* none. *Seed* 1.

SPEC. CHAR. Stem triangular, leafy. Cyme leafy, terminal: its stalks naked and repeatedly subdivided. Spikes clustered.

SYN. Scirpus sylvaticus. *Linn. Sp. Pl.* 75. *Sm. Fl. Brit.* 57. *Huds.* 21. *With.* 77. *Hull.* 14. *Sibth.* 24.

Cyperus gramineus. *Raii Syn.* 426.

MR. GROULT, a very assiduous investigator of English plants, gathered this specimen of the *Scirpus sylvaticus* between Hampstead and Highgate. It is perennial, flowers in June and July, and loves moist shady situations, but is by no means frequently to be met with.

Root fibrous. Stem 3 feet or more in height, simple, erect, leafy, triangular, smooth. Leaves linear, broad, taper-pointed, strongly ribbed, smooth, except the margin of the uppermost; the radical ones numerous, forming a dense tuft; the others alternate. Panicle cymose, spreading, repeatedly branched, the stalks rough, each accompanied by a sheathing bractea at its base. Spikes terminal, most of them clustered, small, ovate. Glumes ovate, entire, bluntish, keeled, green with a tinge of brown towards the extremity. Stamina slender. Style deeply three-cleft. Seed orbicular, with 3 angles, compressed, whitish, smooth, its base enveloped with 6 or 8 bristles twice as long as the seed when arrived at maturity.

BROMUS arvensis.

Field Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle spreading: its stalks branched. Spikelets lanceolate, about eight-flowered. Florets elliptical, imbricated, depressed, smoothish.

SYN. Bromus arvensis. *Linn. Sp. Pl.* 113. *Sm. Fl. Brit.* 130. *Tr. of L. Soc. v.* 4. 289. *With.* 162. *Hull.* 25. *Leers. t.* 11. *f.* 3.

B. erectus β. *Huds.* 50?

Festuca elatior, paniculis minùs sparsis, locustis oblongis strigosis aristatis purpureis splendentibus. *Raii Syn.* 414.

HOW much uncertainty has attended this grass as a native of Britain may be seen in Withering. We doubt whether Hudson or Lightfoot ever knew it. *Fl. Dan. t.* 293. may be intended for an awnless variety; but we have never seen such, and the pubescence is incorrect. Sherard's herbarium contains the true plant, gathered by him near Southampton, and well known to Dillenius, as well as Linnæus. Our accurate friend Mr. Woodward first observed the same in the borders of a field at Earsham, Norfolk, many years ago, and supplied us with fresh specimens last June.

The root is annual. Stem simple, 2 or 3 feet high, leafy, striated, smooth. Leaves bright green, a little downy on each side, their sheaths thickly clothed with soft hairs pointing downwards. Stipula short. Panicle erect, many-flowered; its branches whorled, many of them compound and subdivided, at least in luxuriant specimens, for the plant often grows much larger than in those now before us. Spikes lanceolate and erect at first, afterwards more ovate and drooping, formed of about 8 or more imbricated, elliptical, depressed (not cylindrical or distant) florets, variegated with green, purple, and white, but little downy, and remarkable for a glossy appearance scarcely observable in other *Bromi*. The antheræ are occasionally purple or yellow.

Cynoglossum
officinale.

CYNOGLOSSUM officinale.

Common Hounds-tongue.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-shaped; orifice closed with arched valves. *Seeds* depressed, fixed to the style by their inner margin only.

SPEC. CHAR. Stamina shorter than the corolla. Leaves broad-lanceolate, downy, sessile.

SYN. Cynoglossum officinale. *Linn. Sp. Pl.* 192. *Sm. Fl. Brit.* 216. *Huds.* 80. *With.* 227. *Hull.* 46. *Relh.* 77. *Sibth.* 69. *Abbot.* 41. *Curt. Lond. fasc.* 4. *t.* 16. *Woodv. Suppl. t.* 216.
Cynoglossum. *Raii Syn.* 226.

ABUNDANT in waste ground and by road sides, flowering in June and July.

The root is biennial. Whole herb downy and soft to the touch, exhaling a strong fœtid smell resembling that of mice, or, as some say, the urine of dogs, whence the plant has obtained a coarse, though appropriate, denomination, which may be found in Gerarde's herbal. The stem is about 2 feet high, round, often furrowed, leafy. Leaves remarkably soft and pliable, entire, waved, veiny, of a dull grayish green; the lowermost largest, stalked, lanceolate; the uper ones embracing the stem, and almost heartshaped. Flowers in terminal recurved clusters, growing out into spikes forming a panicle. Calyx downy. Corolla dull purplish red, its lobes rounded, as are also the little hollow valves that close the mouth and conceal the stamina. Stigma acute. Seeds 4, horizontal, obovate, attached by their points, each clothed in a flat, thick coat, rough with numerous hooked prickles, by which the seeds stick to the coats of animals, and are widely dispersed.

The *Cynoglossum* is narcotic, astringent and mucilaginous, but dangerous to be taken internally, at least in quantity.

Silene conica.

Sept. 1 1820. Published by Sir Sowerby, London

SILENE conica.

Corn Catchfly.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* of 1 leaf, swelling. *Petals* 5, with claws. *Caps.* superior, imperfectly 3-celled, bursting at the top. *Seeds* many.

SPEC. CHAR. Stem forked. Petals cloven, crowned. Leaves soft. Calyx when in fruit conical, with thirty furrows.

SYN. Silene conica. *Linn. Sp. Pl.* 598. *Sm. Fl. Brit.* 470. *With.* 416. *Hull.* 98.

S. conoidea. *Huds.* 189. *Linn. Sp. Pl.* 598?

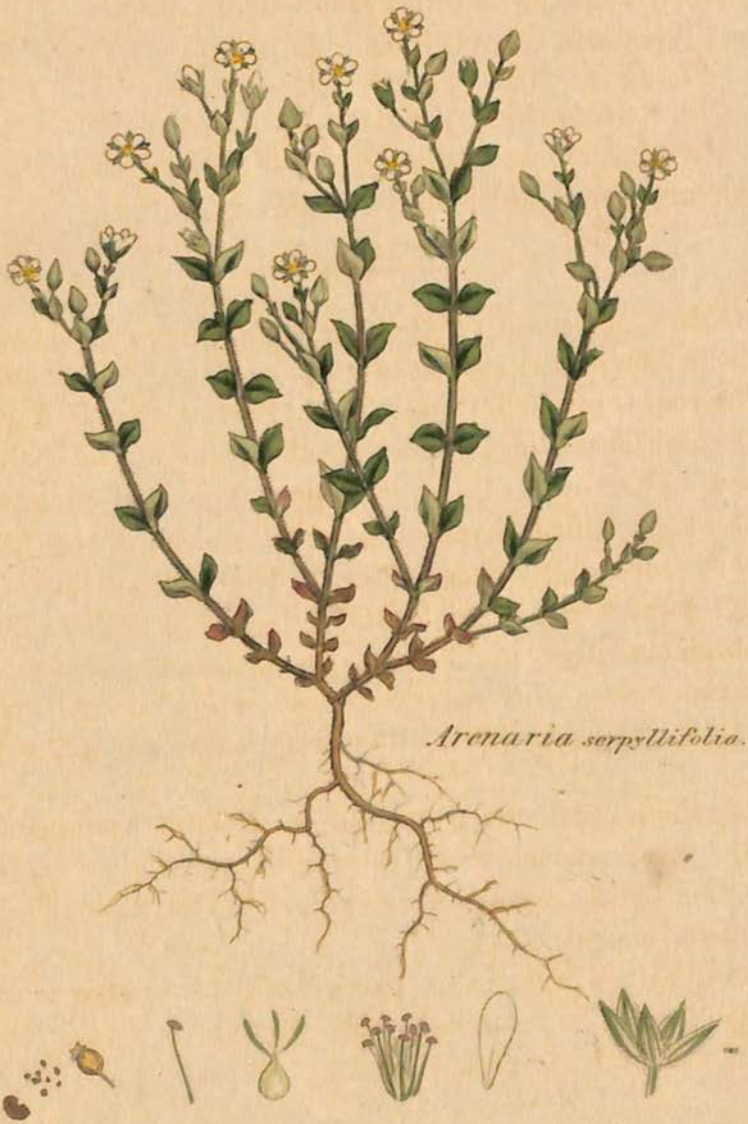
Lychnis sylvestris angustifolia, caliculis turgidis striatis. *Dill. in Raii Syn.* 341.

L. caliculis striatis, secunda Clusii. *Ger. em.* 470.

THIS species of *Silene* is a native of Kent, but, as far as we know, of no other part of Britain. Mr. Dillwyn supplied us with specimens from the sand-hills near Sandown Castle, where it grew in the time of Dillenius. It is annual, flowering in July, and thriving in the most barren sandy soil.

Root small, tapering, but little branched. Stem erect, round, downy, somewhat viscid, branched, leafy, repeatedly forked in the flowering part, various in height. Leaves opposite, linear-lanceolate, entire, acute, clothed all over with soft short down, and of a grayish green colour. Flowers from the divarications of the stem, solitary, stalked, erect, in an evening exhaling a sweet smell, approaching to that of a honeysuckle, but weaker. Calyx cylindrical, becoming conical as the fruit swells, membranous, with 50 green downy prominent equal ribs, and 5 sharp teeth. Petals narrow, their limb cloven, rose-coloured, with a sharp tooth on each side of the base, and a notched scale above, forming the crown. Capsule ovate. Seeds rough.

It is more than probable that the *S. conoidea* is a very slight variety of this, with smoother leaves. The petals being undivided is not an invariable mark. Whatever the figures of Lobel and Gerarde cited in *Fl. Brit.* may be intended for, we now prefer that of Gerarde above quoted as the most exact representation.


Arenaria serpyllifolia.

ARENARIA serpyllifolia.

Thyme-leaved Sandwort.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* 5-leaved, spreading. *Petals* 5, undivided. *Caps.* superior, of 1 cell, with many seeds.

SPEC. CHAR. Leaves ovate, nearly sessile, rough. Calyx hairy, its outer leaves five-ribbed.

SYN. Arenaria serpyllifolia. *Linn. Sp. Pl.* 606. *Sm. Fl. Brit.* 479. *Huds.* 191. *With.* 421. *Hull.* 95. *Relh.* 171. *Sibth.* 142. *Abbot.* 97. *Curt. Lond. fasc.* 4. *t.* 32. *Dicks. H. Sicc. fasc.* 16. 3.

Alsine minor multicaulis. *Raii Syn.* 349.

COMMON on walls and in barren waste places, flowering from May to the middle of July.

The root is small, fibrous, annual. Stems several, 3 or 4 inches high, spreading, a little branched, leafy, rigid, round, downy, forked upwards, set with several pairs of opposite, small, ovate, entire, thyme-like leaves, which are roughish on both sides, and slightly ribbed. Flower-stalks always erect. Leaves of the calyx ovate, acute, hairy, with a white membranous edge; the 3 outermost furnished with 5 ribs, the 2 inner ones with only 3. Petals white, shorter than the calyx. Capsule ovate, with 6 teeth. Seeds rough, reddish.

The whole herb when rubbed has a faint herbaceous smell. We know not that it possesses any peculiar qualities. Small birds, and some caterpillars, eat the flower-buds and unripe capsules.

The structure of the calyx, particularly the number of its ribs, is of great importance in this genus, as in *Linum*, for discriminating the species.

924.
802

Crambe maritima.

Published by P. Sowerby, London.

CRAMBE maritima.

Sea Kale.

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* leathery, globular, without valves, deciduous, containing one seed. The four longer *filaments* with a tooth near their summit.

SPEC. CHAR. Leaves sinuated, waved, glaucous, smooth as well as the stem.

SYN. Crambe maritima. *Linn. Sp. Pl.* 937. *Sm. Fl. Brit.* 695. *Huds.* 299. *With.* 563. *Hull.* 143.

C. maritima, Brassicæ folio. *Raii Syn.* 307.

A NATIVE of sandy sea shores in various parts of England, flowering in May and June. Our specimen grew between Dover and Folkstone. On the North coast of Norfolk the Sea Kale may be found in abundance, and it cannot be overlooked wherever it grows.

The perennial fleshy root is branched at the summit into many branching spreading stems, which, like the whole herb, are smooth, glaucous, and succulent. Leaves large, alternate, on stalks, oblong or roundish, waved, variously lobed and toothed. Corymbi terminal, clustered, forming a dense panicle. Flowers numerous, white. Calyx-leaves concave, spreading. Petals with a large, roundish, notched, horizontal limb. Four longer stamina forked or toothed in their upper part, and furnished with a solitary gland at their base. Stigma sessile, peltate. Pouch globose, fleshy, never splitting into valves, but falling off entire, and containing one large seed.

Many persons cultivate this plant for the sake of its young shoots, which sprout forth very early in the spring, and, if slightly covered with sand, never suffer from any degree of cold known in this climate. When boiled they are not much inferior to asparagus, which they somewhat resemble in flavour.

Lotus angustifolius

Sept. 1 1801 Published by Jas Sowerby

LOTUS diffusus.

Slender Bird's-foot Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Pod* cylindrical, straight. *Wings* of the corolla cohering by their upper edge. *Calyx* tubular.

SPEC. CHAR. Flower-stalks mostly single-flowered. Stem much branched, prostrate. Leaves and calyx hairy. Pods round, linear, and very slender.

SYN. Lotus diffusus. *Sm. Fl. Brit.* 794.
Trifolium corniculatum minus, pilosum. *Bauh. Prod.* 144.

MR. DICKSON first observed this new species of *Lotus* on the rocky beach at Hastings, from whence it was brought us by Mr. E. Forster. Mr. Turner and Mr. Sowerby remarked it growing plentifully in a meadow near St. Vincent's rocks, Bristol. Linnæus confounded it with his *L. angustissimus*, which is a larger plant, with smooth leaves, and shorter, much thicker, pods.

The plant before us has a long, apparently perennial, root, furnished with tubercles as in *Vicia lathyroides*. Stems procumbent, branched, very leafy, hairy. Leaflets and stipulæ all of the same shape, ovate, pointed, rather glaucous, hairy on both sides. Flower-stalks axillary, bearing one flower (rarely two), accompanied by 3 sessile leaflets. Calyx slender-funnel-shaped, very hairy, reddish. Petals full yellow, not orange-coloured. Pod when ripe above an inch long, straight, very slender, cylindrical, or but little compressed, pointed, brown, smooth and shining, cellular within, containing many small globular seeds.

The first flowers appear in May and June, and are followed by a long succession of others. Their small size, and nearly solitary mode of growth, readily distinguish this species from the common one. The specific name was given by Dr. Solander, who described specimens gathered in Madeira.

Lemna trisulca.

Sept.r 1. 1801. Published by Jas. Sowerby, London.

LEMNA trisulca.

Ivy-leaved Duck-weed.

MONOECIA Diandria.

GEN. CHAR. Male, *Cal.* of 1 leaf. *Cor.* none. Female, *Cal.* of 1 leaf. *Cor.* none. *Style* 1. *Caps.* with several seeds.

SPEC. CHAR. Leaves on footstalks, lanceolate, proliferous.

SYN. Lemna trisulca. *Linn. Sp. Pl.* 1376. *Sm. Fl. Brit.* 956. *Huds.* 399. *With.* 43. *Hull.* 202. *Relh.* 346. *Sibth.* 14. *Abbot.* 198.

Lenticula aquatica trisulca. *Raii Syn.* 129.

WHEN the late Professor J. Sibthorp had been at great pains and expense for the accommodation of aquatic plants in the Oxford garden, Dr. Stokes wished, as an indemnification for all his trouble, that he might see the flowers of a *Lemna*. This satisfaction however was denied him. A very few foreign botanists only have seen the fructification of *L. minor*, *gibba* and *polyrrhiza*; no one has hitherto given any account of that of *L. trisulca*, though the plant is sufficiently common in stagnant waters throughout Europe. Mr. D. Turner at length met with this grand *desideratum* early in June last near Yarmouth, and we cannot withhold it from the public.

L. trisulca is a pale-green, smooth, pellucid herb, floating in fresh water, near or upon the surface, and consists of several lanceolate, entire, sometimes waved or toothed, leaves or fronds, each having a footstalk at its base, and producing, from its centre beneath, one solitary simple root, and a pair of young leaves, looking like lobes of the old one. The root is tipped with a membranous sheath. The flowers spring from a lateral chink, whose margin forms the calyx. Most of the flowers we have seen are males, having 2 ascending white smooth stamina, each with a 2-lobed yellow anthera. In some an ovate superior germen stands between the stamina, bearing a simple style, with a cloven stigma. We have not detected any flowers purely female.

Sept. 1, 1801. Published by Jas. Sowerby, London.

Carex incurva.

CAREX incurva.

Curved Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Spikelets clustered into a head, andrōgynous; the lower flowers female. Bracteæ membranous. Stem roundish, smooth. Leaves channelled.

SYN. Carex incurva. *Lightf.* 544. *t.* 24. *f.* 1. *Sm. Fl. Brit.* 971. *Gooden. Tr. of Linn. Soc. v.* 2. 152. *Huds.* 650. *With.* 89. *Hull.* 205.

DR. HOPE received specimens of this *Carex* from the "deep loose sand at the mouth of the water (or river) of Naver, and from near Skelherry in Dunrosness, in Shetland," whence it found a place in the *Flora Scotica*. Professor Beattie has favoured us with specimens from near Aberdeen. It flowers in July.

The root creeps. The stems are mostly curved, 3 or 4 inches high, naked, simple, smooth. Leaves all radical, shorter than the stem, linear, channelled, smooth. Spike terminal, capitate, roundish, or rather conical, composed of several roundish sessile spikelets, each of which consists of a few female flowers in the lower part, and rather more numerous male ones above them. Bracteæ shorter than the spikelets, elliptical, concave, membranous, brownish with a pale edge, slightly keeled. Glumes like them in form and colour, but rather more acute. Stamina 3, long and slender. Stigmas 2, brownish. Fruit ovate, acute, green tinged with brown, smooth at the edge, and very slightly notched (not cloven) at the point.

The *C. juncifolia* of Allioni is the same with this species; but growing in alpine bogs, not exposed to driving sands or torrents, the stem is less frequently curved.

Carex arenaria.

CAREX arenaria.

Sea Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Spikelets crowded, spiked, almost monoicous. Bracteæ membranous; the lower ones leafy. Stem triangular. Leaves flat.

SYN. Carex arenaria. *Linn. Sp. Pl.* 1381. *Sm. Fl. Brit.* 971. *Gooden. Tr. of Linn. Soc. v.* 2. 153. *Huds.* 405. *With.* 90. *t.* 20. *Hull.* 205. *Dicks. H. Sicc. fasc.* 5. 14.

Gramini cyperoidi ex monte Ballon simile humilius, in maritimis et arenosis nascens. *Raii Syn.* 423.

VERY common in the loose sand of the sea shore, where it may be found in flower in June and July.

The root creeps horizontally to a great extent, fixing itself by numerous fibres, and throwing up numerous stems, about a foot high, erect, except when they are overborne by the sand, naked, with 3 sharp angles, roughest in the upper part. Leaves several, sheathing the base of the culm, upright, flat, rough on the edge, terminating in a long taper point. Spike ovate, compressed, composed of several, alternate, generally close-set, sessile, brown, ovate, many-flowered spikelets. Bracteæ lanceolate, keeled, membranous at the edge, the lower ones lengthened out into a leaf. Lower spikelets almost entirely composed of female flowers; upper of male ones, which in all the spikelets are ranged above the females. Glumes lanceolate, pointed. Stamina 3, capillary. Stigmas 2. Fruit ovate, acute, ribbed, bordered with a membrane on each side in the upper part, rough on the edge, tipped with a cloven point.

This *Carex* cooperates with the *Elymus arenarius, Arundo arenaria*, and some other grasses of less note, in fixing the loose barren sands of the sea shore, which its long entangled roots detain, and collect into banks, in time forming powerful ramparts against the ocean. See *v.* 8. *t.* 520.

Equisetum limosum.

EQUISETUM limosum.

Smooth Naked Horse-tail.

CRYPTOGAMIA Filices.

GEN. CHAR. *Catkin* composed of peltate scales, flowering on their inside. *Partial calyx* of 2 valves. *Seeds* numerous, naked, enfolded by 4 pollen-bearing filaments.

SPEC. CHAR. Stem partly naked, smooth as well as the branches. Catkin terminal.

SYN. Equisetum limosum. *Linn. Sp. Pl.* 1517. *Huds.* 448. *With.* 755. *Hull.* 234. *Relh.* 385. *Sibth.* 264. *Abbot.* 222. *Bolt. Fil.* 68. *t.* 38.

E. nudum lævius nostras. *Raii Syn.* 131. *t.* 5. *f.* 2.

ONE of the most common of its genus in watery marshy places, where it comes to perfection and fructifies early in June.

Root perennial, creeping. Stems erect, 2 feet high, jointed, furrowed, quite smooth to the touch, simple and quite naked in their lower part, but towards the top generally set with a few simple, erect, whorled branches, which are furrowed and smooth like the stem. The teeth of all the sheaths are a little blackish. Catkin solitary, terminal, large, ovate, brown, composed of many series of close-set scales, producing seeds as in *E. hyemale*, *t.* 915.

The *Equisetum* mentioned in Ray's Synopsis, 132, *n.* 12, appears to have been a specimen with more branches than usual. Many have confounded the plant before us with the *fluviatile* of Linnæus, who himself did not well understand their differences. The latter is a much larger plant, bearing its fructification on early simple stalks, as in *E. arvense*, while its principal stems are whorled from top to bottom with numerous very long spreading branches, and produce no catkins.

Lecanora crenulata

Sept.r 1. 1801 Published by Jas. Sowerby, London

LICHEN crenulatus.

Little Crenate Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts. Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust scattered, ash-coloured, very thin. Shields minute, dispersed, brownish-gray, with an elevated, crenate, whitish margin.

SYN. Lichen crenulatus. *Dicks. Crypt. fasc. 3.* 14. *t.* 9. *f.* 1. *Achar. Prod.* 76. *With. v.* 4. 17. *Hull.* 289.

L. dispersus. *Achar. Prod.* 49.

FOUND on lime-stone rocks in the mountainous parts of England. The Rev. Mr. Harriman communicated this specimen from Egleston, Durham. Mr. Dickson mentions Yorkshire also as its native county. We have found it by authentic specimens to be the *dispersus* of Dr. Acharius, who, not being aware of its having been already described by Mr. Dickson as *crenulatus*, gave it a new name. In justice to our friend we retain his original one, which is in itself excellent.

The crust is gray or blackish, but so thin and fugacious as not to be always discernible. Shields more or less scattered, a little raised, various in size, but all very small; their disk obscurely convex, smooth, waxy, of a yellowish or brownish gray; their margin very pretty and conspicuous, elevated, rounded, smooth (not mealy), elegantly notched so as to look almost, as it were, beaded, of a pale yellowish white.

Mr. D. Turner has found on Burgh Castle, Suffolk, what seems a variety of this *Lichen* with a whiter crust and blacker shields; and indeed some shields on the Durham specimens are found with a gray or lead-coloured margin.

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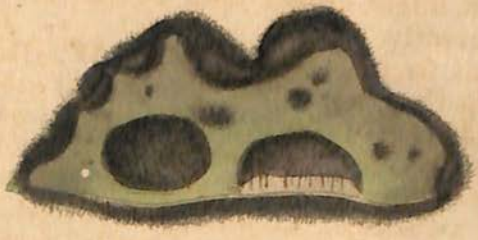


Cyrophora pellita?

Pub. 1 Oct. 1833 by J. & J. Sowerby, London.

LICHEN pellitus.

Fleecy Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts. Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Peltate, leafy, lobed, smooth, of a greenish copper-brown; beneath coal-black, and clothed with branching intricate hairs. Tubercles black, convex, plaited, intricate.

SYN. Lichen pellitus. *Achar. Prod.* 149.

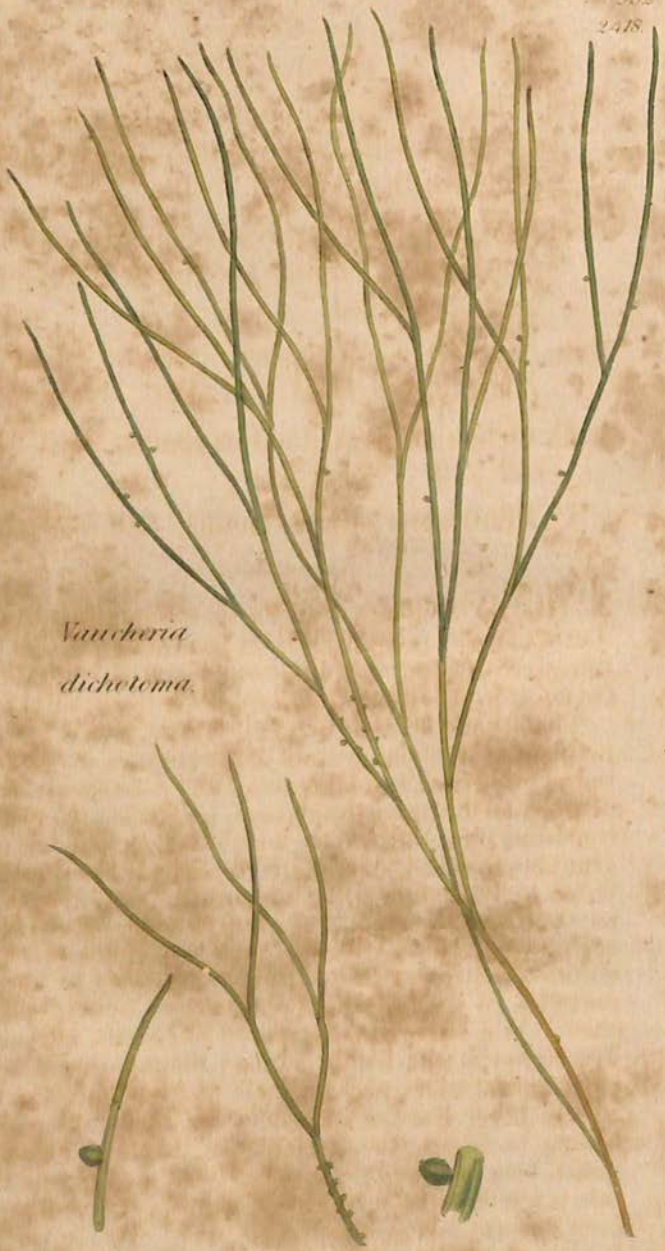
L. velleus. *Huds.* 550.

L. polyrrhizus. *Lightf.* 864. *With. v.* 4. 64. *Hull.* 302.

Lichenoides pullum superne et glabrum, inferne nigrum et cirrhosum. *Dill. Musc.* 226. *t.* 30. *f.* 130.

THE singular tribe of umbilicate or peltate-fronded Lichens is almost entirely alpine, growing on exposed rocks, each plant fixed by a very strong central root or roots, the circumference being loose, and in dry weather often curled inwards. We have hinted, *v.* 9. *p.* 593, that the fructification is peculiar in such as properly constitute this natural tribe; indeed it might almost form a generic character, as will appear presently.

This was sent from Yorkshire by Mr. W. Brunton, and from Durham by the Rev. Mr. Harriman. It grows also on the Welch and Highland mountains—always, we believe, on micaceous rocks. Linnæus confounded it with his *velleus*, which is a very different plant, of which we conceive *his polyrrhizos* to be a variety. *L. pellitus*, first well established as a species by Dr. Acharius, is very much lobed, sinuated, and notched; smooth, not wrinkled or veined; of a greenish or gray brown, varying to a copper-colour; often sprinkled with branching black warts. Beneath it is black, entirely and uniformly covered with dense branched coal-black hairs, which also fringe the margin. Tubercles rather rare, convex, black, formed of a multitude of plaited hair-like lines, but much more complicated and intricate than in any other umbilicated species.



Vaucheria
dichotoma.

Published by Sowerby & Co.

CONFERVA dichotoma.
Forked Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Green, thread-shaped, hollow, repeatedly forked, jointed here and there. Capsules green, elliptical.

SYN. Conferva dichotoma. *Linn. Sp. Pl.* 1635. *Huds.* 593. *With. v.* 4. 129. *Hull.* 330.

C. dichotoma, setis porcinis similis. *Dill. Musc.* 17. *t.* 3. *f.* 9.

C. Plinii, setis porcinis similis. *Dill. in Raii Syn.* 58.

FOUND in ditches near Yarmouth last April by Mr. D. Turner. The plant itself is far from common, and the fructification has never before been observed, either in this or (as far as we know) any other capillary fresh-water *Conferva*.

The whole plant is of a palish grass-green, smooth, and pellucid. Its stems grow in dense clusters, erect (according to the observation of Dillenius), and are repeatedly forked, of an equal thickness throughout, bluntish at the top, hollow, consisting of a thin green membrane enveloping a darker granulated scattered pulp. The cavity is here and there divided by transverse *septa*, and a little contracted at those parts, giving the stem and branches an irregularly jointed appearance, which Dillenius does not mention. Capsules scattered, lateral, sessile, elliptical, scarcely so long as the diameter of the branch, of the texture and colour of the stem. We have not discovered any seeds, insomuch that Mr. Sowerby was led to suspect these capsules might be extraneous bodies, perhaps eggs of some animal. I have, on the other hand, a suspicion that the plant may rather belong to *Chara*, the structure of its stem, especially its joints, being exactly the same as in *C. flexilis*, and the capsule not unlike the fruit of that genus. The anthera however remains unknown.

Juncus
squarrosus

JUNCUS squarrosus.

Moss Rush, or Goose-Corn.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Stem naked. Leaves setaceous. Panicle terminal, compound, clustered.

SYN. Juncus squarrosus. *Linn. Sp. Pl.* 465. *Sm. Fl. Brit.* 378. *Huds.* 149. *With.* 346. *Hull.* 75. *Relh.* 142. *Sibth.* 114. *Abbot.* 79. *Dicks. H. Sicc. fasc.* 13. 12.

J. montanus palustris. *Raii Syn.* 432.

IN boggy spots, on the most barren sandy heaths only, this Rush is to be found, flowering in June and July. We conceive that few plants are less promising to the agriculturist, either as an indication of soil, or with respect to its own qualities.

Root perennial, of a few strong thick fibres. Leaves in tufts, radical, numerous, spreading at the base, but soon curved inward; their form is narrow, channelled, but not keeled, pointed; and they are hard, rigid, and very smooth to the touch. Stems about a foot high, straight, stiff, round, smooth, naked (except at the very bottom), ending in one or two erect branched panicles, whose partial as well as general stalks proceed from reddish-brown, sheathing, long, smooth bracteæ. Flowers large compared with other common species. Calyx dark-brown, with a narrow filmy border. Stamina and style short; antheræ and stigmas long. Capsule obovate, three-sided, bluntish.

Juncus compressus

JUNCUS bulbosus.

Round-fruited Rush.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Leaves linear, channelled. Stem leafy towards the base. Panicle cymose, leafy. Capsules blunt.

SYN. Juncus bulbosus. *Linn. Sp. Pl.* 466. *Sm. Fl. Brit.* 381. *Huds.* 150. *With.* 348. *Hull.* 76. *Relh.* 143. *Sibth.* 115. *Abbot.* 79. *Dicks. H. Sicc. fasc.* 13. 14.

J. parvus, cum pericarpiis rotundis. *Raii Syn.* 433.

THIS *Juncus* is to be found in moist meadows and pastures that are exposed to the salt water, in which kind of situation it is not uncommon. Dr. Goodenough has also found it near Windsor; and our specimen was gathered in marshes near Walthamstow by Mr. E. Forster. We have what appears to be the same, brought by Mr. Dickson from high and rather dry ground in the Highlands. It flowers early in July.

The root is perennial, creeping, though not widely, certainly not bulbous, nor can the bases of the stems be properly so denominated: the Linnæan trivial name, therefore, is unjustifiable, and seems to have been taken from a synonym of Micheli which belongs to our *J. uliginosus*. Stems erect, generally about a foot high, simple, smooth, a little compressed, most leafy in the lower part. Leaves linear, narrow, channelled, acute. Panicle erect, terminal, but often surmounted by a lesser one on a longer stalk, leafy, many-flowered. Flowers small. Calyx bluntish, its segments green with a broad brown edge. Capsule longer than the calyx, of a roundish obovate form.

We know not that this Rush has been applied to any use whatever.

Sonchus
palustris.

SONCHUS palustris.

Tall Marsh Sow-thistle.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Receptacle* naked. *Calyx* imbricated, swelling at the base. *Down* simple, sessile.

SPEC. CHAR. Flower-stalks and calyx bristly, somewhat umbellate. Leaves runcinate, arrow-shaped at the base, rough in the margin.

SYN. Sonchus palustris. *Linn. Sp. Pl.* 1116. *Sm. Fl. Brit.* 816. *Huds.* 337. *With.* 674. *Hull.* 177. *Relh.* 292. *Curt. Lond. fasc.* 5. *t.* 59.

S. tricubitalis, folio cuspidato. *Raii Syn.* 163.

GATHERED by Mr. Croult on the banks of the Thames between Greenwich and Woolwich, late in July last. The plant from which our specimen was taken measured 7 feet in height, it being the largest of the Syngenesious class, and perhaps the tallest herbaceous plant, climbers excepted, that this country produces.

Mr. Curtis has well distinguished this species from the *arvensis*, see *v.* 10. *t.* 674, in opposition to the opinion of Haller. *S. palustris* has a perennial, fleshy, and branched, but not a creeping root. The whole herb is twice or thrice as large as in the *arvensis*, though the flowers are rather smaller, and generally a little paler. The stem-leaves are longer, and their base is arrow-shaped, terminating in a pair of long narrow divaricating lobes, instead of being heart-shaped. Their margin is minutely toothed. The panicle assumes nearly the shape of an umbel or cyme, varying in the number of flowers: its stalks, as well as the calyx, are rough with dense short black glandular hairs or bristles, in which respect, as well as in the seeds and their down, it much agrees with *S. arvensis*.

ATRIPLEX patula.

Spreading Halberd-leaved Orache.

POLYGAMIA Monoecia.

GEN. CHAR. Hermaphr. *Cal.* in 5 divisions, inferior. *Cor.* none. *Stam.* 5. *Style* cloven. *Seed* 1, depressed. Female. *Cal.* 2-leaved. *Cor.* none. *Style* cloven. *Seed* 1, compressed.

SPEC. CHAR. Stem herbaceous, spreading. Leaves triangular-lanceolate, somewhat halberd-shaped. Calyx of the fruit more or less tuberculated at the sides.

SYN. Atriplex patula. *Linn. Sp. Pl.* 1494.
A. hastata. *Huds.* 443. *With.* 274. *Hull.* 226. *Relh.* 379. *Sibth.* 90. *Abbot.* 219. *Lightf.* 636. *Curt. Lond. fasc.* 2. *t.* 66.
A. sylvestris, folio hastato seu deltoide. *Raii Syn.* 151.

ALL our botanists had taken this common Orache for the *A. hastata* of Linnæus, till his herbarium discovered it to be his *patula*. The real *hastata* proves a very different plant, having the valves of the female calyx, when in fruit, very large, membranous, reticulated with veins, and bordered with long setaceous teeth.

A. patula grows every where on dunghills, waste or cultivated land, flowering from June to August. Root always annual, fibrous. Stem with long spreading numerous branches. Leaves alternate, on stalks, mealy beneath; the lower ones hastate, deeply and irregularly toothed; the upper narrower, lanceolate, mostly entire. Clusters of flowers terminal and axillary, long, interrupted, a little leafy. Valves of the female calyx, which alone seems to ripen seed, triangular, acute, toothed about the lateral angles, studded in the middle with a few prominent tubercles. Seed large, rather spiral, dotted.

By the sea-side the whole plant is procumbent, more fleshy, reddish, and all the leaves sometimes entire.

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ERROR.

The plate of Drosera rotundifolia is erroneously engraved 868, instead of 867; and that of D. longifolia 867 for 868.

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